

IN THE

# United States Court of Appeals

FOR THE NINTH CIRCUIT

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THE PLASTIC CONTACT LENS COMPANY,  
a corporation,

*Defendant-Appellant,*

*vs.*

GEORGE H. BUTTERFIELD, SR.,

*Plaintiff-Appellee.*

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## APPELLANT'S OPENING BRIEF.

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## RECORD REFERENCES.

This brief includes an appendix in which certain key exhibits are wholly or partially reproduced. The pages of the appendix are numbered 1a, 2a, etc.; and citations to the appendix are in the form "DX-NN, 136a".

Citations to Volumes 1 and 2 of the Record are in the form "R. 46", and citations to the reporter's transcript of trial proceedings (Volumes 3, *et seq.* of the Record) are in the form "Tr. 438". Plaintiff's exhibits are designated "PX" and defendant's exhibits are designated "DX".

The complete table of exhibits called for by Rule 18(f) is in the appendix at pages 2a-4a.

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**No. 20,212**

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THE PLASTIC CONTACT LENS COMPANY,  
a corporation,

*Defendant-Appellant,*

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GEORGE H. BUTTERFIELD, SR.,

*Plaintiff-Appellee.*

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**APPELLANT'S OPENING BRIEF.**

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Twelve years ago, in *Pacific Contact Laboratories v. Solex Laboratories, Inc.* (9 Cir., 1953), 209 F. 2d 529, Judges Stephens, Orr, and Pope upheld the Tuohy contact-lens patent No. 2,510,438 and hailed its invention as "an idea in advance of the art to which mechanical skill of high order was applied." Now that patent comes again before this Court:

**STATEMENT OF THE PLEADINGS  
AND JURISDICTIONAL FACTS.**

The complaint in this case was filed by George H. Butterfield, Sr., of Portland, Oregon (hereinafter called "Butterfield"), against defendant The Plastic Contact Lens Company, an Illinois corporation (hereinafter called "Plastic"). While Plastic's principal place of business is in Chicago, it has an office in Portland and is licensed to do business in Oregon (R. 45). The jurisdiction and venue of the District Court were based on 28 U.S. Code, §§ 1332 and 1391 (R. 45).

The complaint (R. 1-28) set forth three alleged causes of action. In his first alleged cause of action (R. 1-6), Butterfield averred that he was the owner of United States patent No. 2,544,246 (hereinafter called "the Butterfield patent") for an improvement in corneal contact lenses; that he was engaged in the business of soliciting licensees and granting licenses under the Butterfield patent to manufacturers of contact lenses; that Plastic is the owner of United States patent No. 2,510,438 (hereinafter called "the Tuohy patent") also relating to corneal contact lenses; that by virtue of the settlement of previous litigation between the parties each party had the right to solicit licensees and grant licenses under their respective patents; and that Plastic, since such settlement, had unfairly competed with Butterfield by:

- (a) Indemnifying and offering to indemnify Plastic's licensees against actions for infringement of the Butterfield patent, thereby allegedly inducing such Plastic licensees to infringe the Butterfield patent, discouraging them from taking licenses from Butterfield, and encouraging existing licensees of Butterfield to refuse to pay royalties to Butterfield;
- (b) Filing allegedly unfounded actions against licensees and "prospective licensees" of Butterfield, alleging that Butterfield and his attorneys and licensees and prospective licensees had conspired with others to violate their contractual relations with Plastic, allegedly for the purpose of discrediting and defaming Butterfield and his attorneys and frightening away prospective licensees of Butterfield;
- (c) Under the "false guise" of simplifying royalty accountings, allegedly requiring and attempting to require "Butterfield's licensees and prospective



licensees" to pay to Plastic "unjustified royalties" on unfinished and incomplete lens articles that are not patented;

- (d) Under the guise of simplifying royalty accountings, allegedly requiring and attempting to require "Butterfield's licensees and prospective licensees" to pay to Plastic "unjustified royalties" on unpatented, unfinished, and incomplete lens articles sold to be finished into contact lenses "only under and in accordance with the Butterfield patent"; and
- (e) Allegedly attempting, by personal and telephone calls, to discourage prospective licensees of Butterfield from entering into licenses with Butterfield under the Butterfield patent.

The alleged first cause of action included a recital that Plastic's acts complained of were committed "wilfully, deliberately and in bad faith". An injunction and damages were sought.

The alleged second cause of action (R. 6-7) reasserted the substantive allegations set forth under the first alleged cause of action and claimed a right of recovery on the theory that Plastic's acts constituted actionable interference "with the contractual relations between Butterfield and his said licensees", and "deceived and misled Butterfield's said licensees and prospective licensees into the false belief that it is unnecessary for them to take licenses from Butterfield or to pay royalties to Butterfield even though they make and sell corneal contact lenses under and in accordance with the said Butterfield patent."

The alleged third cause of action (R. 7-9) reasserts the substantive allegations of the first cause of action, claims jurisdiction under the antitrust laws and 28 U.S. Code,

§§2201-2202, as well as by virtue of diversity of citizenship, asserts that unfinished, unpatented lens articles are commodities traded in interstate commerce, and alleges that Plastic does not own, control, or license any United States patent covering such unfinished lens articles. The complaint goes on to aver that Plastic may not legally indemnify or offer to indemnify any contact-lens manufacturer against liability for infringement of the Butterfield patent, and asserts that Plastic's doing so is a breach of the settlement contract by which the prior litigation between the parties was settled. As part of the alleged third cause of action, the complaint also avers that it is a breach of the settlement contract as well as a violation of the antitrust laws for Plastic, by contract or otherwise, to require any Butterfield licensee to pay to Plastic royalty upon any unpatented material or article of commerce used by said licensees in fabricating corneal contact lenses under the Butterfield patent. The complaint prays injunctive relief, damages, and award of costs and attorneys' fees.

The amended answer (R. 33) admitted the formal allegations of the complaint with respect to the identity of the parties, their respective ownerships of the Butterfield and Tuohy patents, and their being engaged in patent licensing; it denied, however, all the charges of wrongdoing asserted under each of the three causes of action.

In addition, Plastic filed a counterclaim (R. 35), alleging that Butterfield had damaged Plastic extensively by making false and misleading statements to contact-lens manufacturers as to the respective legal scopes and meanings of the Butterfield and Tuohy patents, by assisting and supporting groups of contact-lens manufacturers formed to injure Plastic by sabotaging its Tuohy patent, by representing to Plastic's licensees that the Tuohy pat-

ent is invalid and unenforceable, that Plastic's license agreements are invalid and in violation of the antitrust laws, and divers other acts of alleged misconduct directed to injuring Plastic.

Butterfield filed a reply (R. 42) to the counterclaim, denying the allegations of wrongdoing therein.

Following the trial of the cause, the District Court entered on March 1, 1965, findings of fact and conclusions of law (R. 104-153) resolving wholly in Butterfield's favor the issues arising on the complaint and answer and on the counterclaim and reply. An interlocutory judgment (R. 154) was entered on April 23, 1965, dismissing the counterclaim, ordering an accounting of damages to be recovered by Butterfield from Plastic, and permanently enjoining Plastic from:

- (a) Making any type of representation, including non-disclosure or concealment, concerning the "scope, qualities or characteristics" of the Butterfield and Tuohy patents respectively except in exact and complete accordance with the characterizations of those patents embodied in the District Court's findings of fact, such findings, so far as material, being set forth in the judgment;
- (b) Making any type of representation, including non-disclosure or concealment, concerning the settlement of the former action between the parties, except in accordance with the District Court's findings on that subject as set forth in the judgment;
- (c) Enforcing, using, or claiming a royalty base in its license agreements under the Tuohy patent by which the amount of royalty payable to Plastic is measured by or computed upon lenses or devices, finished or unfinished, other than those made under the teachings of the Tuohy patent;

- (d) Continuing to maintain in force any existing indemnity agreements, or offering to enter into any new indemnity agreements, indemnifying Plastic's licensees either partially or totally against claims for infringement of the Butterfield patent or claims for infringement arising from the use or manufacture of any device not made in accordance with the teachings of the Tuohy patent; and
- (e) Instituting, maintaining, prosecuting, or continuing actions "against licensees of Defendant or Plaintiff and others" wrongfully and without foundation charging alleged conspiracy with plaintiff or with others and the assertion of damages therefor.

Immediately upon entry of the judgment, its injunctive provisions were stayed by virtue of an order (R. 164) conditioned on the posting by Plastic of a \$50,000 bond. The bond with appropriate security was duly posted (R. 167) and the injunction is accordingly stayed pending disposition of this appeal.

This Court's jurisdiction of the present appeal arises from 28 United States Code, §1292(a)(1), which renders appealable interlocutory judgments that grant injunctions.

## STATEMENT OF THE CASE.

### I. The Questions Involved.

The basic questions presented by this record are pure questions of law. The first one is:

1. Where the claims of a contact-lens patent (Plastic's Tuohy patent No. 2,510,438), already held valid by this Court and beyond any doubt a pioneer, call for a contact lens having on its inner surface a curve of greater radius than the portion of the eye which it covers, thus providing "a small but gradually increasing clearance" between the lens and the underlying eye tissue,

(a) Should such patent claims be restricted in scope to the *particular lens* shown in the drawing of the patent?

Or, on the other hand,

(b) Should the scope of the patent claims embrace *any lens* which responds to the language of the claims and hence possesses the "gradually increasing clearance" which is the hallmark of the invention?

Beyond any doubt, the correct answer is "No" to part (a) of the stated question, and "Yes" to part (b). In other words, the claims of such a patent should be liberally construed so as to protect fully the pioneer invention that was patented. The District Court in this case, however, misconceiving the law, held the other way.

The second question presented has to do with the legal scope of the Butterfield patent No. 2,544,246. It requires consideration of these basic facts, all of which are of public record in the Butterfield patent file history:

(i) The Butterfield patent discloses a contact lens having two or more concentric curves on its under-surface, so selected as to conform to the underlying eye curvature throughout the entire lens area; and the language of the patent claims explicitly requires such overall conformity.

(ii) The Butterfield patent was granted on a "continuation-in-part" application. In his predecessor application, Butterfield disclosed and sought to claim a lens curved to conform to the eye surface in the central area but flared outwardly in its peripheral area to provide a gradually increasing clearance from the eye in that region. Butterfield's claims to that type of lens, however, were *rejected* as "unpatentable over Tuohy", were *abandoned*, and were *replaced* by the narrowly detailed claims granted in the patent.

With those facts anent the Butterfield file history in mind, the second question presented by this record is this one:

2. Can the Butterfield patent include within its legal scope a contact lens having an under-surface that diverges from the eye in the peripheral area, so as to provide in that region a gradually increasing clearance between the lens and the eye?

Beyond doubt, the correct answer to that question is "No", for a classical file wrapper estoppel confines the scope of the Butterfield patent to lenses actually conforming to the eye curvature in their peripheral areas as well as in their central areas. The District Court, however, erroneously answered this question "Yes"; and thus wrongly concluded that the Butterfield patent, rather than

the Tuohy patent, is the one that covers most modern contact lenses.

The third basic question presented on this appeal has to do with patent license agreements and the legally permissible ways in which the royalty for a patent license may be measured. The question may be stated thus:

3. Where, by the nature of a contact lens and the manner in which it is ordered, manufactured, and sold, it would be expensive, inconvenient, and burdensome to measure a patent royalty by counting the actual number of lenses made under a licensed patent, may the licensor of such a patent legally contract with a licensee for a royalty proportional in amount to the total size of the licensee's contact-lens business, calculated at so many cents per lens sold, whether patented or unpatented?

The correct answer to that question is unmistakably "Yes"; the Supreme Court so held in a directly pertinent case (*Automatic Radio Mfg. Co. v. Hazeltine Research, Inc.* (1950), 339 U.S. 827, 833-834). The District Court, however, without mentioning *Automatic Radio*, answered the question "No", and held Plastic's royalty base to be in violation of the antitrust laws.

The fourth and last basic question presented by this record is:

4. Where the licensees of a pioneer patent are persistently threatened with infringement actions and otherwise harassed by the owner of a junior patent which actually covers none or substantially none of its licensees' products, may the licensor of the pioneer patent legally contract to indemnify its licensees against liability for infringement of the junior patent?

The correct answer to that question is of course "Yes". The District Court, however, held Plastic's indemnification of its licensees to be wrongful and illegal—"wholly different" from the conventional patent indemnities that are commonplace in business practice.

Other questions, of derivative and less far-reaching character, will be alluded to in the argument. The four above set forth, however, define the basic areas in which this Court should correct the decision below.

## **II. The Facts Of The Case**

As just noted, the basic questions presented by the record are questions of law; the *facts*, in the evidentiary sense, are essentially undisputed. Many of the "findings of fact" are challenged (Specification of Errors, pages 39-47, *infra*), but the error that permeates them, we shall show in the Argument, is mostly due to the District Court's having "interwoven" conclusions of law with statements of fact (R. 104).

Highlighting the legal nature of the issues, the record citations herein will consist, in nearly all cases, of references to public records, stipulations, or evidence offered by Butterfield. In some cases, facts are annotated by a summary of the parties' contentions, to aid the Court in pinpointing the areas of dispute.

### **A. The Parties And Their Respective Businesses**

Butterfield is a licensed optometrist and majority stockholder of George H. Butterfield & Son, a corporation that manufactures plastic contact lenses. Butterfield is also, as previously noted, the owner of the Butterfield patent. (R. 45; PX-45, 9a)

Plastic, also a contact lens manufacturer, is owner of the Tuohy patent by purchase from its original owner,



Solex Laboratories, Inc. Plastic bought the patent after a judgment was entered holding it valid and infringed by Plastic's lenses. More on that anon. (R. 45-46).

Plastic contact lenses are prescribed by physicians or optometrists, collectively known in the industry as "fitters". Fitters normally buy the lenses they need from manufacturing laboratories, of which there are several hundred in the United States, some large, some small. (R. 46; Tr. 307-308, 324-326).

By long odds the most important facts in the case are those which concern the Tuohy and Butterfield patents, what lenses they respectively cover, and how they are licensed to lens manufacturers by their respective owners. We shall now, therefore, review those facts in considerable detail:

## **B. The Patents In The Case.**

The Tuohy and Butterfield patents both relate to corneal contact lenses. The Tuohy patent (PX 43, 5a) is the senior of the two and will be dealt with first.

### **1. The Tuohy Patent And Its History, In The Patent Office And The Courts.**

The Tuohy patent was granted on an application filed February 28, 1948, by one Kevin M. Tuohy of Los Angeles, and assigned to a California corporation called Solex Laboratories, Inc. It describes and claims contact lenses of the so-called "corneal" type—i.e., lenses proportioned in size so as to overlie only the cornea, as opposed to covering both the cornea and the adjoining area of the eye known as the "sclera". The patent describes the fitting relationship of the Tuohy lens to the underlying eye surface in these terms (6a, Col. 2, line 22):

“A further important characteristic of the improved lens resides in the fact that although it is in the nature of a concavo-convex section of transparent material *largely conforming in shape and size to the cornea of a given eye*, the inside or concave surface actually is slightly flatter or may be regarded as having a slightly greater radius of curvature than the cornea. In this manner the lens may actually contact the cornea near the center of the lens while the portions of the lens adjacent its margin are slightly spaced therefrom. This space affords an opportunity for the natural eye fluids to enter and relieves pressure on the cornea.”\*

The Patent Office granted two claims on the Tuohy invention. Claim 1 reads thus (8a):

“1. A contact lens applicable to the human eye comprising a concavo-convex lens formed of light-transmitting material having a marginal size smaller than the limbus portion of the eye to which it is applicable but larger than the maximum iris opening, said lens having a radius of curvature on its concave side slightly greater than the radius of curvature of the cornea to which it is applied so that radially from the center of the lens there will be a small but gradually increasing clearance for the entry of natural eye fluids between the lens and the cornea, said lens being ground to correct for visual deficiency.”

After the Tuohy patent issued in June of 1950, some contact-lens manufacturers took licenses under it, and others were sued for infringement. The first infringement case to be decided was *Solex Laboratories, Inc. v. Pacific Contact Laboratories, Inc.*, in which Judge Benjamin Harrison, of the Southern District of California, held the Tuohy patent valid and infringed. He awarded attor-

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\* Emphasis in quotations is added throughout this brief, unless otherwise noted.

neys' fees to Solex in addition to damages, on a finding that the defendant's infringement was "both deliberate and wilful". (PX 128).

On appeal (*Pacific Contact Laboratories, Inc. v. Solex Laboratories, Inc.* (9 Cir., 1953), 209 F.2d 529), this Court affirmed Judge Harrison's decision as to the validity and infringement of the Tuohy patent, and upheld his award of damages plus attorneys' fees. The Tuohy invention was described by this Court in these terms (209 F.2d., at 530-531):

"Tuohy's claim of invention lay in the development of a contact lens which eliminated the need for buffer solutions and which could be worn for long periods without causing eye irritation. Tuohy accomplished this result by eliminating the scleral flanges and making a lens slightly smaller than the limbus portion of the eye, but larger than the maximum opening of the iris and by making the radius of curvature on the concave side of the lens slightly greater than the radius of curvature of the eye at the cornea upon which the lens rests, thus enabling the natural fluids to reach all portions of the eye."

Anent the stature of Tuohy's contribution, this Court said (209 F.2d., at 533):

"The district court could not well say that the development of a lens, which utilizes the limbus and capillary action to retain its position and which is so shaped as to utilize the natural fluids of the eyes to avoid irritation, is the result of mere mechanical skill. There is present, also, *an idea in advance of the art* to which mechanical skill of *high order* was applied."

This Court further wrote (209 F.2d, at 532):

“It must also be noted that the Patent Office, only after making a close examination of Tuohy’s claim of invention, granted him a patent on the corneal type lens. And there is evidence that the corneal lens met with wide acceptance and success only after Tuohy put it on the market.”

Following this Court’s decision, Solex filed six additional infringement actions in the Southern District of California, which were consolidated and tried together before District Judge Tolin (*Solex Laboratories, Inc. v. Graham et al.* (S.D. Cal., 1958), 165 F. Supp. 428). One of the suits before Judge Tolin involved lenses made by Plastic (165 F. Supp., at 436). In resisting the charge of infringement against Plastic’s lenses, it was argued that Plastic’s lenses had “facets” (*i.e.*, additional curves) on their concave sides, in addition to the curve that Tuohy’s claims called for. This argument was rejected; Judge Tolin commented that even if the facets contributed something of value, “. . . it does not follow that a patent is avoided by *adding* something to the patented structure.” (165 F. Supp., at 437).

Similar rulings were made respecting the contact lenses sold by the other defendants, Judge Tolin holding (165 F. Supp., at 437):

“It is a well-known principle of patent law that *addition* to a patented structure does not enable one who makes, uses, or sells the patented thing without license to avoid a charge of infringement.”

Judge Tolin said of the stature of the Tuohy invention (165 F. Supp., at 431-432):

“Although today the Tuohy development does not seem particularly involved and now appears to be

the natural way in which to construct an efficient contact lens, *it is apparent from the evidence that Tuohy's simple structure was not understood or known prior to his invention.* Tuohy arrived at a simple solution to a difficult problem. *In doing this he went far beyond the skills of a competent workman in the art.* The concept of his structure was *entirely new.*"

Judge Tolin added (165 F. Supp., at 434):

"Not one of the cited examples of prior art teaches a radius of curvature on its concave side slightly greater than the radius of curvature of the cornea to which it is applied so that radially from the center of the lens there will be a small but gradually increasing clearance for the entry of natural eye fluids between the lens and the cornea. Despite the absence of this characteristic in each one of defendants' prior exhibits, *this characteristic is the very heart of the teaching of the patent in suit.* It is what eliminates an artificial buffer solution and permits free use of natural tear fluids. *This was new in the contact lens art* and the discovery of how to accomplish it was invention."

Notwithstanding the quoted views of this Court and Judges Harrison and Tolin as to the Tuohy patent, the District Court in the present case held the Tuohy patent to be restricted in legal scope to the specific single-curve lenses illustrated in the *drawing* of the patent. The District Court held (Finding 7(c), R. 108):

"The Tuohy Patent, on the other hand, describes and claims a lens whose concave surface is defined by a *single* spherical curve of a radius 'flatter,' or of sufficiently longer radius than that of the cornea so as to provide a gradually increasing clearance or tear space between the lens and cornea radially outwardly from the center. The lens of the Tuohy Patent is known in the trade as the 'flatter type lens.' "

## 2. The Butterfield Patent And Its Patent Office History.

The Butterfield patent is junior in date to the Tuohy patent, Butterfield's parent application having been filed on August 1, 1949, seventeen months after the Tuohy application was filed (PX-43, 5a; DX-OO, 155a).

In appraising what the Butterfield patent covers, it is of the greatest importance to understand how the disclosures and claims of the parent Butterfield application differed from the disclosures and claims of his offspring application that matured into the patent.

The parent application described and illustrated (159a, 163a) a corneal contact lens shaped in its central area to conform to the underlying eye surface but ground in its outer zone with a *greater* radius of curvature than the underlying eye surface. This, as may be seen from Butterfield's parent-case drawing (163a), provided a gradually increasing clearance between the lens and the eye surface, outwardly from the center of the lens. This clearance zone, the original Butterfield application taught, was desirable because it afforded a space for "tear fluids", and the claims filed with the specification specifically required such a zone. For example, Butterfield's claim 4 in the parent application read thus (DX-OO, 161a).

"4. A corneal contact lens covering only the cornea portion of the natural eye and *relieved* within its inner side to form a *capillary space extending around the entire lens.*"

Butterfield's claims originally submitted in his parent application were rejected by the Patent Office as "obviously fully met" by the prior art (DX-OO, 164a). They were cancelled and replaced (168a, 172a) by six new claims likewise calling for a clearance zone in the peripheral region of the lens. Those were rejected (174a-175a) "as

unpatentable over Tuohy”, and the Butterfield parent application was thereupon abandoned.

The parent Butterfield application was replaced by a continuation-in-part application, which matured into the Butterfield patent. In that continuation application (DX-NN, 130a), there was no teaching of peripheral recessing or any gradually increasing clearance zone near the edge of the lens. On the contrary, the offspring application showed and described a lens with a concave under surface parallel to the eye curvature throughout the whole lens area (9a, 140a, 136a).

The new Butterfield application (DX-NN, 137a-138a) was filed with claims addressed (a) to a lens having an inner curvature of generally paraboloidal shape (Application claims 1-5) or (b) to a lens having a spherical curvature in the central portion and a curvature of gradually increasing radius in the peripheral regions (Application claims 6-9). Those claims were all rejected as unpatentable over the prior art (DX-NN, 141a); were cancelled by Butterfield (143a), and replaced by the three claims ultimately granted (143a-144a). The broadest of those was patent claim 1 (PX-45, 11a; DX-NN, 143a):

“1. A corneal contact lens of concavo-convex form in section and of a size to lie within the area defined by the limbus having an inner central spherical area *conforming to the corresponding area of the cornea to which the lens is applied* so that undue pressure will not be present at any point, the remainder of said inner surface extending radially outward toward the limbus being formed on a curve different from that of said central area and *corresponding in curvature with that portion of the corneal peripheral area to which the lens is applied*, whereby space is provided for the natural uninterrupted circulation of lacrimal fluids between said lens and the cornea.”



All the claims of the Butterfield patent are limited, like the quoted claim 1, to lenses in which the “central spherical area” conforms “to the corresponding area of the cornea” and “the remainder of said inner surface” of the lens is “formed on a curve corresponding in curvature with that portion of the corneal peripheral area to which the lens is applied”.

Plastic contends that the Patent Office history just recounted, marked as it was by abandonment of broad claims and retreat to progressively narrower ones, after repeated rejections on prior art, restricts the legal scope of the Butterfield patent to contact lenses that truly respond to the language of his claims—*i.e.*, are shaped to conform to the underlying eye surface in the peripheral portions of the lens and in the central portion as well. Butterfield, seemingly shrugging off the file history of his patent, contends that it embraces within its legal scope any lens “that has a central optical area which conforms to the curvature of the cornea and has a secondary curvature surrounding it which is different than the one in the middle,” whether or not there be conformity to eye curvature in the peripheral region. (Tr. 417, and see also Tr. 407).

The District Court adopted Butterfield’s views as to the legal scope of his patent (Findings 7(b) and 8, R. 107-108), without, however, attempting to explain how Butterfield’s broad interpretation of his patent could be reconciled with its file history.

### **3. The Curvature Of The Contact Lenses Being Marketed Today**

Present-day lenses are usually bi-curved; that is, the concave side of the lens is ground with one degree of curvature in the central or optical area of the lens and with



another, flatter degree of curvature in the spherical area. The average curvature of the central area of the patient's cornea is measured by fitters with an instrument called a Keratometer, the curvature reading thus obtained being colloquially known as "K". Some fitters, the record shows, prescribe the central curvature of their lenses to be "on K", while others fit their lenses "flatter than K"—*i.e.*, with a central radius of curvature greater than the average radius of curvature of the central part of the patient's cornea. (Tr. 414, 470, 621-625, 643; PX-88B).

Even when a lens is fitted "on K", the lens curvature in the central region is often "flatter"—*i.e.*, is ground to a longer radius—than the apex of the patient's cornea, because the corneal apex frequently has a steeper curvature than the value indicated by the Keratometer (Tr. 623-625).

While some fitters, at least, try to make their lenses conform to the corneal curvature in the *central* area, the evidence of both parties is that the fitting of the *peripheral* curves is almost universally "flatter" than the corneal surface, thus providing a gradually increasing clearance between the lens surface and the eye in the outer regions of the lens. To-wit:

- (a) This was attested by Plastic's witness Dr. Don West, an optometrist associated with Pacific University (Tr. 646-648), who explained that such a clearance is necessary to insure exchange of lachrymal fluid beneath the lens. Dr. West explained that the reservoir of tears must be thicker near the edge of the lens than in the central region, because a lens having an equal depth of tears from edge to edge would not be "vented" and hence would be tight and uncomfortable to wear (Tr. 654-656).

- (b) Butterfield's witness Dr. Jerome Conlogue, while stating that he tried to fit lenses to conform throughout their area (Tr. 314-315, 332), acknowledged that he obtained such over-all conformity with no more than ten percent of his patients. The lenses fitted to the other ninety percent of his patients, Dr. Conlogue stated, did *not* conform to the eye curvature throughout the lens area (Tr. 333).
- (c) Another Butterfield witness, contact-lens manufacturer James A. Satterlee, after testifying that he normally ground what he called "conforming type lenses", acknowledged that the conformity was *only* in the central region of the lens. This was his testimony (Tr. 469):

"Q Now, with respect to the testimony you gave that your practice is to make a conforming type lens, did you understand this to refer to conforming in respect to the optical area, or did you mean to include also conforming in respect to the marginal area of the lens?

"A. No, this is conforming as to the *optical area* of the lens."

- (d) In Plaintiff's Exhibit 104-H, p. 22, an exhibit offered by Butterfield to illustrate contemporary fitting practice (Tr. 368-369), the fitting relationship between a contact lens and the cornea is described in these terms:

"The clearance between the lens and the cornea is equidistant from the periphery of the primary curve of the lens to its apex. The secondary curve *diverges away* from the curve of the cornea. The width of the secondary curve varies, depending upon the amount of movement

required, forming a slight *funnel shaped clearance* that will allow the tears to flow under the lens."

(e) Similarly, Plaintiff's Exhibit 104-E says this of the peripheral curve:

"The purpose of the peripheral curve is to provide for a free lacrimal flow. It permits the lens to hold position without tight symptoms developing. We can refer to the peripheral flattening of the lens as providing a lens with a *vented circumference* which is a pre-determined value and used as a definite part of the lens fitting."

As the Court will realize, the actual clearance involved in fitting contact lenses is very small. Fortunately, science has provided a simple testing technique, known as the fluorescein test, by which the existence and relative sizes of such small clearances between the eye and an overlying lens can be accurately determined. Fluorescein (misspelled "flnorscene" in the transcript) is a dye, harmless to the eye, that glows with a yellowish-green hue when illuminated by ultraviolet light—so-called "black light". (Tr. 300-301, 651-652, 330-332).

In fitting a contact lens, a fitter can determine where and to what degree the lens clears the eye surface by dissolving fluorescein in the patient's lachrymal fluid (tears) and then examining the patient's eye under black light. Where the lens touches, the eye will appear dead black under the fluorescein test. Where there is a thin tear layer—*i.e.*, a small degree of clearance—a faint glow will appear. The greater is the clearance between the lens and the eye, the more brilliant will be the fluorescent glow, as

the thickness of the tear layer increases. (Tr. 300-301, 330-333, Tr. 650-654)

That contact lenses are normally fitted with peripheral curves divergent from the underlying eye surface is brought out forcefully in parts of Plaintiff's Exhibit 104 which describe how a well-fitted lens should appear in the fluorescein test. Thus:

(a) In Plaintiff's Exhibit 104-J, it is stated that the fluorescein pattern should show "A band of green, preferably not too dark in color, surrounding the lens and *indicating peripheral clearance.*"

(b) In Plaintiff's Exhibit 104-E, the fluorescein indication of a properly fitted lens is described in this language:

"The fluorescein picture of the lens fit observed using black light illumination is of tremendous significance when fitting Conforma lenses. The central pool should be a minimal clearance pool. It should be noted that even a faint dye pool will indicate apical clearance. It is not necessary for the corneal pool to be a full, deep one.

*"The dye pool at the periphery should be a wide, deep green pool about 1.0mm in diameter. The fluorescein will also indicate the effectiveness of the peripheral flange diameter by showing the effective width of this area when observed."*

(c) In Plaintiff's Exhibit 104-D, page 8, the optimum lens fit is illustrated as a small dark area in the center surrounded by a ring of solid green glow, indicating increasing peripheral clearance.

(d) In Plaintiff's Exhibit 104-DD, pages 28-32, the fluorescein appearance under the peripheral curves of

a properly fitted lens are described as “brilliant yellow-green”, it being noted that the edge portion of the lens is “the brightest fluorescein area, due to the additional two flatter peripheral curves”.

To sum up: Standard professional practice calls for fitting contact lenses so that their peripheral curves diverge from the underlying eye surface, to “vent” the lens and insure free circulation of lachrymal fluid beneath the lens. Dr. West so testified; and Butterfield’s witnesses and exhibits confirm Dr. West’s testimony. The only evidence suggesting that anyone even tries to fit lenses with overall conformity was in the testimony of Butterfield himself (Tr. 301) and in that of Butterfield’s witness Dr. Conlogue (Tr. 331). Dr. Conlogue, however, attested that he achieved a conforming fit throughout the lens area on no more than ten percent of his patients (Tr. 332); and Butterfield testified that he did not always achieve a conforming fit (Tr. 390).

The basic issue in the case is highlighted by the foregoing review of the two patents in the case and the evidence as to how contact lenses are really fitted:

(a) Plastic contends that the Tuohy patent broadly protects its inventor’s discovery that a successful corneal contact lens must provide “a small but gradually increasing clearance for the entry of natural eye fluids” at the periphery of the lens; and therefore covers the bulk of present day lenses, nearly all of which, the evidence shows, are ground with flattened peripheral curves to afford the clearance Tuohy taught and claimed. By the same token, Plastic insists, the Butterfield patent does not cover such lenses, by reason of its junior date, its claim language limiting the invention to lenses that con-

form to the eye surface throughout the lens area, and the file wrapper estoppel that prevents its being construed to cover lenses with peripheral clearance.

(b) Butterfield's position, on the other hand, is that the Tuohy patent covers only lenses with a *single* spherical curve on their inner faces (as opposed to two or more concentric curves); and that the Butterfield patent broadly monopolizes all bi-curved and multi-curved lenses that approximately conform to the eye surface in their central areas, even though they may be consciously ground to diverge from the eye surface in their peripheral areas.

### **C. The Licensing Programs, Past And Present, Of The Parties.**

#### **1. Licensing Under The Tuohy Patent**

While the Tuohy patent was still in the hands of its original owner, Solex Laboratories, Inc., about fifty contact-lens manufacturers took out licenses under it. Illustrative of those is the license reproduced in the appendix (PX-46, 12a-17a), by which the licensee agreed to pay a royalty of \$3.50 per pair on all finished lenses covered by the Tuohy patent and to pay royalties on a sliding scale downward from \$2.00 on unfinished lenses covered by the patent or which would contributorily infringe it.

After Plastic acquired the Tuohy patent from Solex, it continued an active licensing program, substituting for the \$3.50 royalty, however, a new royalty scaled downward from \$1.00 per pair but measured by the li-

censee's entire sales of contact lenses, whether patented or not. A typical license of this new type is reproduced in the appendix (PX-46, 18a-26a).

At present, all or substantially all of Plastic's license agreements (of which there are about 135 outstanding) are of the form above described (R. 46).

Plastic's royalty-paying licensees include substantial companies such as Bausch & Lomb, Inc., and a large number of smaller manufacturers (PX-109).

The District Court held, as a "fact", that Plastic's current license agreements, properly construed, call for royalty payment only on lenses actually covered by the Tuohy patent (Finding 27(f), R. 120-121) and further found as a "fact" that Plastic was violating the anti-trust laws by collecting royalties under such agreements measured by the licensees' entire sales of contact lenses (Findings 27(g)-27(k), R. 121-123, and Finding 57, R. 143-144).

## **2. Licensing Under The Butterfield Patent**

For several years past, Butterfield has maintained an active licensing program under the Butterfield patent and, in soliciting licenses, has called personally on many contact-lens manufacturers throughout the country. At present, approximately thirty-five active manufacturers of plastic contact lenses hold licenses under the Butterfield patent, about twenty of which also have licenses under the Tuohy patent (R. 47; DX-C, Answer to Interrogatory XIV, 122a).

Plastic is a licensee under the Butterfield patent, its license having been acquired in May, 1960, for a lump-sum consideration of about \$50,000. George H. Butter-

field & Son is a licensee under the Tuohy patent, such license having been granted in April, 1962, as part of a litigation settlement. (R. 47).

The various Butterfield licenses vary greatly one from another, but fall into distinct groups according to their royalty terms and related provisions. Copies of all the Butterfield licenses are in the record as Plaintiff's Exhibits 84 and 117. Examples of the various types are printed in the appendix (36a-51a, 96a-112a).

By one Butterfield contract, he granted to James C. Dippery and Jack R. Case, of Houston, Texas, an exclusive license under the Butterfield patent in certain southern states, with the right to grant sub-licenses (PX-84F, 36a).

Butterfield agreed to pay Dippery and Case one-third of all royalty revenue derived from the geographical area covered by the agreement (37a), and Dippery and Case promised not to grant sub-licenses except in accordance with one or the other of two form agreements (38a). One of those form agreements (the "paid up license form") called for a lump-sum royalty, to be calculated in this manner (38a-39a):

*"Add the total sales of proposed licensee, reasonably verified from business records exhibited, of manufactured contact lenses, in the year immediately preceding the intended commencement date of the license agreement. Divide this total of single lenses by 12 to arrive at an average monthly figure of sales of single lenses. This figure as to average monthly sales of single lenses shall then be multiplied by 50 cents per lens. The result so obtained is the monthly payments measured by the then unexpired portion of*



*the life of the Canadian patent, disregarding fractions of less than one-half month. The Canadian patent expires November 11, 1969.*"

The noteworthy things about that formula are:

(a) Butterfield measured the royalty to be paid by applying a rate of 50¢ per lens to the licensee's "total sales . . . of manufactured contact lenses" (*not* the licensee's sales of lenses covered by the Butterfield patent); and

(b) The licensee's obligation to pay royalty continued not until the expiration of the Butterfield U.S. patent on March 6, 1968, but until November 11, 1969, *more than a year later*, when the *Canadian* patent would expire. (These were not to be Canadian sales; the Dippery-Case agreement covered only certain states in the U.S.A.)

Numerous license agreements recently entered into by Butterfield have been of the paid-up type, in which the licensee has contracted to pay a lump-sum royalty at the rate of so many dollars a month until paid in full (*e.g.* 109a). In those agreements, the lump royalty has been calculated (DX-Q, 127a-128a) by multiplying the number of months remaining in the term of the Butterfield patent by the licensee's average monthly production of contact lenses (*not* just lenses covered by the Butterfield patent). The resultant lens total is then converted to dollars of royalty by applying a rate of 75¢ per pair (R. 284). The paid-up licensees were given this lower rate instead of the "regular" royalty of one dollar per pair because "of simplifying their bookkeeping, simplifying my bookkeeping, simplifying

the fact that I wouldn't have to send traveling auditors around, which costs money to audit their books." (Tr. 421-422; also see DX-Q, 127a).

The royalty calculation in each paid-up license agreement included payments on so-called "unfinished" lenses as well as on those that were "finished"; the same is true of Butterfield's agreements calling for royalty payments on a lens-by-lens basis. In fact, Butterfield has never made any distinction, in any of his different types of licenses, between unfinished and finished lenses, as far as royalty is concerned. (Tr. 437-438).

Another type of Butterfield license required payment of royalty on a lens-by-lens basis, but called for royalty on all bi-curved lenses, without regard to whether such lenses conformed to the eye throughout their area as called for by the Butterfield patent claims. An example of such a license is the one with Crown Contact Lens Corporation (PX-117, 102a-106a), which required royalty payments of 50¢ for each "licensed unit" sold by the licensee "either in finished or semi-finished form" (103a). The term "licensed unit", in turn, was defined thus (103a):

"2. Licensed Unit:

"Without purporting or intending either to enlarge or to restrict the claims of the patent herein licensed, and solely for the purpose of simplifying and facilitating the transactions of the parties hereunder, a 'licensed unit' is hereby defined as a concave-convex corneal contact lens which has

- (a) a central area having an inner spherical surface and

(b) a marginal portion, encompassing the said central area, having an inner surface formed on a curve different from that of the inner surface of the central spherical area,

the said lens being adapted to provide throughout its entire inner surface uninterrupted clearance between the lens and the cornea over which it is to be positioned.”

The facts of interest about that definition of “licensed unit” are that it (a) omitted the requirement of the Butterfield patent claims that the central spherical area conform to the “corresponding area of the cornea” and (b) also omitted the requirement of the Butterfield claims that the curve on the marginal portion of the lens be “corresponding in curvature with that portion of the corneal peripheral area to which the lens is applied”. The “licensed units” on which royalties were payable thus included *all* bi-curved lenses sold by the licensee, whether covered by the licensed patent or not.

In soliciting licensees under his patent, Butterfield has made many personal calls on lens manufacturers, and both individually and through his attorneys has represented that his patent covers bi-curved lenses that conform to the corneal surface in the central area, without mentioning that to be under the patent a lens must *also* conform to the corneal curvature in the peripheral areas. (Tr. 407-408, 410-411, 416-417; also see PX-143E, 119a; and see Tr. 411-413).

In one instance of record, after Butterfield's counsel had written a threatening letter and represented the scope of the Butterfield patent to be broader than the language of its claims (PX-143G, 116a), the alleged infringer's

attorneys pressed for a firm commitment on the patent's coverage, asking (PX-143D, 119a):

“Is it your contention that the use of a bi-curved or multi-curved lens automatically infringes upon the Butterfield patent?”

Butterfield's counsel did not answer directly, responding in these words (PX-143C, 120a-121a):

“You apparently misunderstood our letter of August 7th because we did not say that your client had infringed the Butterfield patent. In fact, we did not have sufficient information to form an opinion as to whether an infringement had actually occurred or was contemplated. . . . We would prefer not to express our own views as to the scope of the Butterfield patent because, as you of course know, in the final analysis that is something which only the courts can determine.”

While the District Court held that Plastic violated the antitrust law by using a royalty base not restricted to lenses covered by the licensed patent, it absolved Butterfield's licensing activities from any such taint (Finding 57, R. 143-145).\*

#### **D. The Prior Litigation Between The Parties And How It Was Settled.**

At the time Plastic acquired the assets and liabilities of Solex, it inherited an already-pending action originally brought by Solex against George H. Butterfield & Son,

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\* Plastic does not contend that Butterfield's licenses were illegal. It does say, however, that the District Court should have treated Butterfield's use of royalty bases broader than his patent coverage as proof that such royalty bases *are* reasonable and proper in the contact-lens industry, because of the complexity and expense of individual lens-by-lens royalty accounting.

charging that company with infringing the Tuohy patent. A counterclaim had been filed, on behalf of the company and Butterfield personally, charging Solex with infringing the Butterfield patent (R. 46-47, PX 1-3, DX-A and KK).

That action was settled in April, 1962, by the entry of a Consent Judgment, a Stipulation of Facts and Matters, and a Stipulation for Dismissal of Counterclaims and Pending Motions. The terms of settlement did not deal with the legal scope of either the Tuohy or Butterfield patents. The consent judgment did include recitations that both patents were valid and that Solex (not Plastic) had infringed the Butterfield patent (PX 1-3; DX-A).

In addition to granting a license under the Tuohy patent to George H. Butterfield & Son as part of the litigation settlement, Plastic, in the same transaction, granted to Butterfield the right to confer sub-licenses under the Tuohy patent on four of Butterfield's early licensees, namely, Titmus Optical Company, Sloan Optical Company, Rogers Brothers, and Utah Optical Supply Company. Butterfield sought those Tuohy sub-licensing privileges because he had explicitly indemnified Titmus against infringement liability and, as to the other three, felt he "owed them something" and had a "moral obligation" to protect them from liability for infringement of the Tuohy patent. (PX-3; PX-117, 100a; Tr. 432-437).

#### **E. Butterfield's Asserted Grounds Of Complaint Against Plastic.**

The gist of Butterfield's complaint is that Plastic, after the settlement of the prior litigation in April of 1962, did various acts alleged to constitute actionable interference with Butterfield's soliciting and procurement of licenses under the Butterfield patent. Those acts fall under four headings, as follows:

**1. Plastic's Licensee Bulletin Of October 25, 1962.**

After the settlement agreement, some of Plastic's licensees asked whether any rights had accrued to them, under the most-favored clauses of their licenses, by virtue of Plastic's grant of a Tuohy-patent license to Butterfield. After obtaining an opinion on the point from counsel (52a), Plastic issued a licensee bulletin on October 25, 1962, in which certain terms of the settlement agreement with Butterfield were noted and the licensees were advised that the settlement did not in counsel's opinion affect the rights of Plastic's licensees under their most-favored clauses. (PX-53, 27a).

Butterfield contended, and the District Court found (Findings 46-47, R. 129-132), that Plastic's October 25, 1962, licensee bulletin actionably interfered with Butterfield's interests because it did not set forth in full all the terms of the Butterfield-Plastic litigation settlement.

Plastic contends (a) it has never had a duty to act as Butterfield's spokesman, (b) nothing in the bulletin was untrue, and (c) Butterfield could and should have issued his own bulletin if he wished to publicize additional facts regarding the settlement.

**2. Plastic's Offer To Indemnify Its Licensees Against Infringement Liability Under The Butterfield Patent.**

As already noted, Butterfield, in his solicitation of lens manufacturers, repeatedly represented his patent to have a legal scope embracing bi-curved and multi-curved lenses fitted to conform in the central area, without mentioning that the patent covered only lenses which *also* conformed to the corneal surface in the peripheral areas. This campaign produced unrest among Plastic's licensees and resulted in letters to Plastic of which Defendant's Exhibit

DD (128a-129a) is illustrative. In an effort to offset the disquieting effect of what it considered misrepresentations by Butterfield, Plastic, on December 10, 1962, offered to its licensees in good standing an indemnity agreement (29a-33a) indemnifying them to the extent of any attorneys' fees and court costs they might incur in the defense of an action for infringement of the Butterfield patent, plus 85% of any damages assessed therein.

The indemnity agreement (32a) explicitly provided that the obligation "shall extend only to claims, suits, or actions for infringement" and would "not apply to any contractual claims or disputes between Licensee and Butterfield."

Less than one-third (about 40 out of 135) of Plastic's licensees accepted the indemnity agreement (R. 132-133).

Between May, 1962, when the previous litigation was settled, and December, 1962, when Plastic made its indemnity offer to its licensees, Butterfield solicited twenty-six lens manufacturers and secured eleven new licensees. Between the first of December, 1962, and the date of trial, Butterfield solicited twenty-five lens manufacturers and secured an additional eleven new licensees (PX-73, 34a-35a; DX-C, 122a-126a).\*

Butterfield's royalty collections went up rather than down after Plastic issued its indemnity offer. In the last seven months of 1962, Butterfield received royalties at an average rate of \$1,703 per month. During the year 1963, after the indemnity offer, Butterfield's royalty collections averaged \$2,872 per month. (PX-118, 113a).

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\* Butterfield testified (Tr. 165) that he secured twelve new licensees in the earlier period, but his own list (PX-73, 34a-35a) shows only eleven.

In the first four months of 1964, Butterfield collected royalties at an average rate of \$2,818 per month—essentially the same as in 1963—even though in the same period Plastic's collections from Tuohy licensees dropped off sharply from their 1963 level. (PX-118, 113a; PX-121, 115a).

The District Court held that Plastic's offer of an indemnity agreement was wrongful, done to injure Butterfield in his licensing program, "and was wrongfully used with the purpose and effect of preventing Butterfield from obtaining additional licensees." The District Court further found that "Plastic's offer of indemnity in conjunction with its existing claim of broad royalty base was a clear invitation to all of its licensees to continue to trespass on Butterfield's rights under his Patent and look solely to Plastic for indemnity." (Finding 56, R. 141, 143).

Plastic challenges the above-noted finding and in the Argument will show that there is no evidence that any licensee in good standing of Plastic is making or selling lenses within the legal scope of the Butterfield patent. The quoted finding, Plastic contends, resulted from the District Court's having erroneously accepted and adopted Butterfield's own estimate of what his patent covers.

### **3. The Royalty Provisions Of Plastic's License Contracts.**

Butterfield complained that Plastic had violated the antitrust laws by licensing the Tuohy patent on agreements calling for royalty measured by the licensee's total sales of contact lenses, as opposed to measuring the royalty solely on lenses covered by the Tuohy patent. Plastic defended this charge on the grounds:



- (a) That the royalty provisions in its license agreements were of a type expressly approved by Supreme Court precedent;
- (b) That the royalty base used was reasonable and warranted in this case because royalty accounting on a lens-by-lens basis would be expensive and impracticable; and
- (c) That Butterfield himself has certified the soundness of Plastic's position in this regard by using in many of his own licenses a royalty base not limited to lenses covered by his patent. (See pages 25-30, *supra*.)

The District Court, as already mentioned (page 30, *supra*), held that Plastic license agreements should be construed to require payment only on lenses actually covered by the Tuohy patent, and further held that Plastic was violating the antitrust laws by collecting royalties on the basis of the licensees' entire sales of contact lenses (Finding 27, R. 120-123; Finding 47, R. 143-144). The District Court also held (Finding 57(a), R. 143-144):

“There is no evidence whatsoever in the record justifying any claim by Plastic that convenience of accounting is a proper excuse for such a broad royalty basis. Plastic called no licensees and no one from its own administrative staff to testify as to any difficulties which might exist in this area.”

Plastic contends that the following evidence of record does sustain its position that “convenience of accounting is a proper excuse for such a broad royalty base” as it uses:

- (a) Butterfield's witness Dr. Conlogue testified it was impossible by mere examination of a lens or

reading of a prescription to determine whether or not the lens would conform to the curvature of the cornea for which it was prescribed (Tr. 326). Dr. Conlogue admitted that he, as a manufacturer of lenses filling prescriptions sent in by his customers, has no way of knowing in any given instance whether he is operating under one patent or another or operating under no patent at all (Tr. 326). Thus accurate lens-by-lens accounting would require that auditors secure from outside sources, and act on, information not available in the records of the licensee manufacturers.

(b) Butterfield himself, as already stated, has granted numerous licenses in which the amount of royalty was measured by the licensee's total sales of contact lenses, as opposed to sales of lenses covered by the Butterfield patent. Butterfield explained that such royalty arrangements were desirable because of "simplifying their bookkeeping, simplifying my bookkeeping, simplifying the fact that I wouldn't have to send traveling auditors around, which costs money to audit their books." (Tr. 422, and references cited at pp. 27-28, *supra*).

(c) Butterfield's witnesses and exhibits and the testimony of Plastic's witness Dr. Don West (summarized and cited at pages 18-23, *supra*) show that contact lenses today almost always have peripheral curves that diverge from the eye and hence provide a small but gradually increasing clearance in the marginal region of the lens. In other words, the record shows that the lenses being sold by Plastic's licensees normally do utilize the Tuohy invention and are covered by the Tuohy patent.

#### **4. Plastic's Legal Actions Against Butterfield, His Attorney, and Third Parties.**

Butterfield's final ground of complaint arises from Plastic's having sued a number of its defaulting licensees for royalties due, and from its having named Butterfield and his attorney Collins Mason as parties defendant in an action, now voluntarily dismissed, that charged them with conspiring to induce Plastic's licensees to break their contracts with Plastic.

The District Court held that Plastic's conspiracy charge was made without probable cause and was wrongful; it also held that Plastic's civil actions against its defaulting licensees were "wholly groundless" and "brought for the wrongful purpose and effect of inducing persons in the trade not to deal with Butterfield." (Findings 50-51, R. 133-137; Finding 67, R. 148; Conclusion of Law VI, R. 151).

This last-mentioned finding—that Plastic's actions against its own licensees for unpaid royalties were "wholly groundless"—was apparently an offspring of the District Court's impression that Plastic's license contracts violated the antitrust laws. At all events, there is no suggestion in the record and no contention by Butterfield that the licensees Plastic sued were not in default.

On the issue whether Plastic had probable cause for charging Butterfield and his attorney Mason with conspiring to induce Plastic's licensees to violate their contracts, the following facts are relevant:

(a) In the latter part of 1962, Butterfield's lawyer Collins Mason entered his appearance as additional counsel for the defendant in an action brought by Plastic against Con-Cise Lens Co., a defaulting licensee of very limited financial resources (PX-146,

p. 10; Tr. 428, 515). During the same period, Mason also appeared as counsel against Plastic in an action brought by Plastic in Chicago, Illinois, against Midwest Scientific Co. to restrain infringement of the Tuohy patent (Tr. 485-487).

(b) In January, 1963, some of Plastic's defaulting licensees that had been sued for unpaid royalties began soliciting contributions to finance their litigation against Plastic; in one letter requesting such contributions, Mason was designated by name as the lawyer to be hired and paid with the money being sought (Tr. 530-535, esp. 534). In another instance the party soliciting contributions to its litigation war chest was Con-Cise Lens Co., represented by Mason (Tr. 517-521).

(c) Throughout 1963 and substantially down to the date of trial, Butterfield's lawyers cooperated actively with attorneys conducting litigation against Plastic in New York, Texas, Chicago, and elsewhere. This activity has included exchange of pleadings and deposition transcripts (PX-59, 85, 86, 144; Tr. 540-542). As recently as November, 1963, Collins Mason even tendered unsolicited advice to a Chicago lawyer, questioning the legality of the already-executed settlement between Plastic and Midwest Scientific Co. (DX JJ-1, 176a, Tr. 548-551).

After the trial, Plastic acknowledged (R. 277) that its conspiracy charges against Butterfield were unproved and voluntarily withdrew them, because there is no evidence that Butterfield took part in or contributed to the collateral activities of his attorney Mason directed against Plastic and the Tuohy patent. Plastic does, however, contend that its action was not brought without probable cause.

## SPECIFICATION OF ERRORS

The key errors underlying the District Court's decision were errors of law, four in number, to-wit:

1. Instead of giving the Tuohy patent the liberal interpretation which its early date, the stature of its invention, and the language of its claims entitled it to, the District Court restricted the scope of the Tuohy patent to the precise type of lens illustrated in its *drawing*, disregarding the broader inventive concept plainly taught in the specification and defined in the patent's claims.

2. In contrast to the over-narrow interpretation given the pioneer Tuohy patent, the District Court interpreted the Butterfield patent far more broadly than warranted by the language of its claims or the scope of its contribution to the art. The District Court's interpretation of the Butterfield patent, if upheld by this Court, would give Butterfield a broad area of monopoly he *irrevocably disclaimed* by abandoning claims rejected as "unpatentable over Tuohy".

3. The District Court erroneously held that Plastic had violated the antitrust laws by charging royalties under the Tuohy patent measured by the licensee's total sales of contact lenses, as opposed to sales of lenses covered by the licensed patent. This ruling was made despite a record proving (a) that such a royalty arrangement is a reasonable and practical means of measuring the value of a patent to a contact-lens manufacturer, (b) that measuring royalty by counting the lenses made under a particular patent is, in the contact-lens industry, an expensive, burdensome accounting task, (c) that Butterfield admitted those facts by himself collecting royalties measured in amount by the licensee's *total sales of lenses*, regardless of patent coverage.

4. The District Court erroneously held that Plastic violated the law by agreeing to indemnify its Tuohy patent licensees against liability for infringement of the Butterfield patent. This error flowed directly from the District Court's mistaken interpretations of the Tuohy and Butterfield patents which led to the belief that the bulk of present-day lenses are covered by the Butterfield patent and few, if any, are covered by Tuohy. The reverse is actually the case, and the record plainly so demonstrates when the patents are correctly construed.

In introducing the findings of fact and conclusions of law, the District Court stated (R. 104):

"In order to present a more meaningful result, findings of fact and conclusions of law are, in some instances, interwoven."

The findings were, in nearly all instances, "interwoven" with one or more erroneous legal conclusions, and hence such findings are erroneous, even though, in some cases, the underlying evidentiary facts were correctly stated. Specifically:

5. The District Court erred in holding (Finding 7(b), R. 107-108) that the Butterfield patent includes within its scope any corneal contact lens having at least two concentric curves of different curvature on its concave surface. Correctly construed, the Butterfield patent covers such a lens only when all the curves on the concave surface conform to the underlying eye curvature, so that the lens as a whole conforms to the eye in the marginal area as well as the central area.

6. The District Court erred in holding (Finding 7(c), R. 108) that the scope of the Tuohy patent is

limited to lenses whose concave surface “is defined by a *single* spherical curve”, of a radius longer than that of the underlying eye curvature. In so holding, the District Court misunderstood the meaning of the Tuohy patent claims, which are not limited to lenses having only a *single* curve on their concave sides. Correctly construed, the Tuohy claims cover all lenses having “a” curve providing “gradually increasing clearance” between the eye and the outer part of the lens, whether such curve is single or one of a plurality of curves.

7. The District Court erred (Finding 8, R. 108) in holding that a substantial volume of the contemporary trade in contact lenses consists of lenses covered by the Butterfield patent. There is no evidence that that is so, and the record proves the contrary.

8. The District Court erred (Finding 12, R. 109-110) in holding the Tuohy patent limited by file wrapper estoppel and in holding Plastic estopped from proving the true legal scope of the Butterfield patent; it also erred in finding “no justification for Plastic’s position, asserted on oral argument, that the Tuohy Patent is broad in scope, but that the Butterfield Patent is narrow, and of only very limited utility or use.”

9. The District Court erred (Finding 23, R. 116) in holding that the papers filed in settlement of the previous litigation between Plastic and Butterfield “are of significance in considering the contentions of the parties with respect to the scope of the Butterfield patent as related to the Tuohy patent.” There was no determination in the previous litigation, either by adjudication or consent, as to the legal scope of either the Tuohy patent or the Butterfield patent. It

was agreed that as between the parties both patents are valid, but nothing was said or agreed to as to their scope.

10. The District Court erred (Finding 27(f), R. 120-121) in holding that the word “devices”, as used in the royalty clauses of Plastic’s current license agreements, is limited to lenses covered by the Tuohy patent. The District Court should have ruled in this connection (a) that “devices”, as used in Plastic’s current license agreements, embraces *all* contact lenses sold by the licensee during the term of the license, and (b) that Plastic’s current license agreements, as thus construed, are legal, valid, and proper, under the rule of *Automatic Radio Mfg. Co. v. Hazeltine Research, Inc.* (1950), 339 U.S. 827, 833-834.

11. The District Court erred (Findings 27(g), 27(h), 27(i), 27(j), and 27(k), R. 121-123) in holding that Plastic’s current license agreements are illegal, invalid, and in violation of the antitrust laws. (While designated findings of fact, these errors are legal in nature.) This same error appears in and taints Findings 29, 30, 39, and 57 (R. 125-127, 143-144).

12. The District Court erred (Finding 41, R. 128) in holding that Butterfield had or has a property right in a “potential market” consisting of the “licensees of Plastic”, there being no evidence that Plastic’s licensees are selling any substantial number of lenses falling within the true legal scope of the Butterfield patent. This erroneous finding, like Findings 42, 44, 45, and others, stemmed from the District Court’s acceptance of Butterfield’s theory that his patent covers any multi-curved corneal contact lens, whether or not it conforms to the underlying eye surface throughout its area.



13. The District Court erred in holding (Findings 43, 44, and 45, R. 128-129) that substantial numbers of manufacturers were making lenses within the scope of the Butterfield patent, and that "there was a substantial demand in the manufacturing and fitting trade" for lenses within the legal scope of the Butterfield patent. These erroneous findings also stem from the District Court's over-broad construction of the Butterfield patent.

14. The District Court erred (Findings 46 and 47, R. 129-132) in holding that Plastic was under a duty (apparently, in the District Court's view, a fiduciary obligation) to act as Butterfield's spokesman in communications to the trade. Nothing in the relationship between Plastic and Butterfield created any such obligation on Plastic's part.

15. The District Court erred (Findings 48, 49, 55, 56, 59, and 65, R. 132-133, 140-143, 146-148) in holding illegal, unjustified, and insincere the offer from Plastic to its licensees to indemnify them in the event they should be sued for infringement of the Butterfield patent. The District Court further erred in holding Plastic estopped to carry out its indemnity agreements (Finding 56(d), R. 143). Plastic's being a licensee of the Butterfield patent does estop it as a matter of law from challenging the *validity* of the Butterfield patent, but leaves it free to show that the patent has not been *infringed*. The District Court should have held that Plastic's offer of indemnity to its licensees was a legitimate, good-faith business transaction, justified as a defense measure against unwarranted harassment by Butterfield of Plastic's licensees.

16. The District Court erred (Findings 50 and 51, R. 133-137) in holding that Plastic's actions against its licensees for recovery of unpaid royalties were groundless. The royalties sought by these actions were owing to Plastic, under legal, enforceable license contracts with the respective defaulting defendants.

17. The District Court erred (Findings 51, 52, 68, R. 134-139, 149) in holding that Plastic had no probable cause or reasonable justification for charging Butterfield and his counsel Mason with conspiring with divers defaulting licensees of Plastic to destroy Plastic's licensing program under the Tuohy patent. Those conspiracy charges failed of proof only because it appeared that Mason's activities against Plastic and the Tuohy patent were independent acts not authorized or paid for by Mason's client Butterfield.

18. The District Court erred (Finding 53, R. 139) in holding that Plastic has asserted an unduly wide scope for the Tuohy patent. Plastic has asserted for the Tuohy patent only that scope it legally has, as a pioneer patent already adjudged valid by this Court. In the same finding, the District Court erred in holding that Plastic had "improperly asserted . . . that the Butterfield patent is inoperative, highly restricted in scope and lacks utility." There is no evidence that Plastic has ever asserted that the Butterfield patent is inoperative or wholly lacking in utility. The Butterfield patent is in truth highly restricted in scope, by virtue of its late date, its narrow claim language, and the file wrapper estoppel in its Patent Office history.

19. The District Court's Finding 57 (R. 143-145) is clearly erroneous. The evidence shows that convenience of accounting is a compelling reason, in the contact-lens industry, for the type of royalty clause

in Plastic's license agreements. Finding 57(b) (R. 144) is not a fact finding, but an erroneous legal conclusion asserting, in contravention of controlling authority, that Plastic's royalty provisions are illegal. Finding 57(c) and all its sub-divisions (R. 144-145) constitute clearly erroneous statements regarding Butterfield's own licensing practices. The incontrovertible proof is that Butterfield himself, for reasons of accounting convenience, has for years collected royalties based on and measured by the licensee's entire business in contact lenses, patented and unpatented—i.e., the sort of royalty arrangement which the District Court held to be illegal when embodied in Plastic's contracts.

20. The District Court erred (Finding 58, R. 146) in holding that acts of Plastic have resulted in causing Butterfield licensees to stop paying royalties to Butterfield. There is no evidence that that is so.

21. Finding 59 (R. 146-147) is actually a legal conclusion and is clearly erroneous. The District Court should have held that Plastic's acts did not violate any law or invade any right of Butterfield.

22. The District Court erred (Finding 60, R. 147) in holding (a) that Plastic had been guilty of wrongful conduct, (b) that Butterfield had suffered actionable damage as the result of Plastic's conduct, and (c) that he would suffer substantial and irreparable actionable damage in the future unless Plastic were restrained by appropriate injunction. In the same finding, the District Court erred in implying that Butterfield is entitled to recover attorneys' fees from Plastic in any amount.

23. The District Court erred (Finding 61, R. 147) in holding that Butterfield justifiably proceeded against Plastic rather than suing manufacturers of contact lenses whom Butterfield considers to be infringers. The District Court should have held that a bona fide contested suit for infringement of the Butterfield patent was the proper and best way to resolve the dispute as to the scope and stature of the Butterfield patent.

24. The District Court's Finding 62 (R. 147-148) is clearly erroneous (a) in holding that substantial numbers of the corneal contact lenses currently being marketed are within the legal scope of the Butterfield patent, and (b) in holding it "untrue" that the great bulk, if not all, of the successful corneal contact lenses being marketed today are within the legal scope of the Tuohy patent.

25. The District Court erred (Finding 63, R. 148) in holding that the Butterfield patent has been infringed by many of Plastic's licensees. This finding is not supported by any competent evidence.

26. The District Court erred (Finding 64, R. 148) in holding that Butterfield has not asserted for his patent a scope far broader than it actually has, and in holding that Butterfield has not made infringement charges based on over-broad pretensions as to the scope of the Butterfield patent.

27. The District Court erred (Finding 65, R. 148) in holding that Plastic did not offer its indemnity agreement in December, 1962, in a sincere effort to protect its licensees who were not making lenses covered by the Butterfield patent. The District Court also erred, in the same finding, in holding that said

indemnity was offered for the purpose of preventing Plastic licensees manufacturing lenses within the coverage of the Butterfield patent from dealing with Butterfield.

28. Clearly erroneous is Finding 71, (R. 149) which states there is no evidence that Butterfield has ever asserted or contended for any broader scope of the Butterfield patent than is "described and claimed in and by said Patent."

29. By reason of the basic legal errors made by the District Court in his decision of the case, all of the legal conclusions Nos. I-X and XII-XIII inclusive (R. 149-153) are clearly erroneous.

30. Finally, the District Court erred in failing to enter the findings of fact and conclusions of law proposed by the defendant (R. 259-283), which accurately epitomized the evidence and applicable law.

## ARGUMENT.

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### Summary.

Two fundamental errors of law inspired the subsidiary errors in the record and led the District Court to misjudge the equities. They were:

1. The District Court, failing to heed legal rules that govern the construction of patents, did not accord to the Tuohy patent a legal scope commensurate with the stature of the invention it protects.

2. The District Court, again in disregard of controlling rules of law, gave the Butterfield patent a broad, wholly unwarranted construction, and hence wrongly concluded that it, rather than the Tuohy patent, covers the bulk of present-day contact lenses.

Those errors, and others which sprang from them, cry out for correction. The judgment below was legally wrong and grossly unjust.

**I. The Tuohy Patent Covers The Pioneer Invention On Which The Corneal Contact-Lens Industry Was Founded. The Law Requires, Therefore, That The Tuohy Patent Be Liberally Construed, To Protect Fully Tuohy's Basic Invention. The District Court Erred Grievously In Failing To Do So.**

The pivotal issues in this case relate to what lenses are covered, respectively, by the Tuohy and Butterfield patents. Those issues, therefore, will be dealt with first, beginning with the Tuohy patent.

This Court, it will be recalled (pp. 13-14, *supra*), characterized the Tuohy invention as "an idea in advance of the art to which mechanical skill of high order was applied" (*Pacific Contact Laboratories v. Solex Laboratories, Inc.* (9 Cir., 1953), 209 F.2d 529, at 533). This Court also noted (209 F.2d., at 532) "that the corneal lens met with wide acceptance and success only after *Tuohy* put it on the market."

In *Solex Laboratories, Inc. v. Graham* (S.D. Cal., 1958), 165 F. Supp. 428, 434, Judge Tolin stated that "the very heart of the teaching" of the Tuohy patent is the use, on the concave side, of a radius of curvature slightly greater than that of the cornea to which the lens is applied, providing "a small but gradually increasing clearance for the entry of natural eye fluids between the lens and the cornea." That Judge Tolin was right is confirmed, and the vital nature of Tuohy's contribution is certified, by the fact that present-day contact lenses almost universally *have* such a curvature. (The evidence of *both* parties proves this; see pages 18-24, *supra*.)

In brief, present-day contact lenses *do* utilize the Tuohy teachings, *do* respond to the language of the Tuohy claims, and hence *are* covered by the Tuohy patent. Nevertheless, the District Court somehow concluded (Finding 7(c), R. 108) the Tuohy patent is limited in scope to lenses whose concave surface “is defined by a *single* spherical curve”, and hence does *not* cover any lens with more than one curve on its concave side.

This was error of law of the first magnitude. It was squarely in conflict with Judge Tolin's decision in *Solex Laboratories, Inc. v. Graham et al.* (S.D. Cal., 1958), 165 F. Supp. 428, 437, holding — correctly — that “*addition* [of something *extra*] to a patented structure does *not* enable one . . . to avoid a charge of infringement.”

What the District Court did here was to measure the scope of the Tuohy patent by its *drawing*, instead of by its *claims*. This was clear error. Moreover, had the District Court followed correct legal principles, the Tuohy patent would have been accorded a liberal range of equivalents in recognition of its pioneer status, to the end that all lenses utilizing the principles Tuohy taught would be covered by the patent. Instead, apparently overlooking the prior decisions of this Court and Judge Tolin, the District Court wrote (Finding 12, R. 110) that it could “find no justification for Plastic's position . . . that the Tuohy Patent is broad in scope”; and Plastic was castigated (Finding 53, R. 139) for calling the Tuohy patent a pioneer.

The law by which the District Court should have judged the scope of the Tuohy patent was that stated in *Del Francia v. Stanthony Corp.* (9 Cir., 1960), 278 F.2d 745, 747, where this Court wrote:

“The general rules of patent claims construction are well settled. A patent is to be construed as a con-

tract, with the intent of the parties uppermost so as to give effect to their legitimate expectations. Further, since letters patent are contracts, *questions of construction are questions of law* for the court. . . . The *claims* are a measure of the monopoly granted to the inventor, . . . and they can never be broader than the invention disclosed to the public. . . . While the claims must be read in the light of the disclosure of the specifications, this does *not* restrict the invention to the precise structure disclosed, but rather to the *real invention* as found in the specifications and drawings.”

The quoted passage of course states Hornbook law, exemplified by numberless other cases. An example is *Badowski v. United States* (Ct. Cl., 1960), 278 F.2d 934, at 936:

“It is well settled that the invention covered by a patent is *defined by the language of the patent claims* and *not* by the drawings shown in the specifications. . . . The specifications merely teach others one or more ways of practicing the invention.”

Again, in *Smith v. Carter Carburetor Corp.* (3 Cir., 1942), 130 F.2d 555, 559, the law was stated thus:

“The claims of the patent are to be read in the light of the disclosure of the specifications, not to *restrict* the invention to the precise structure disclosed, but in order to grasp the *principle* of the invention *so as to measure properly the range of equivalents.*”

The legal rule governing construction of pioneer patents, of which Tuohy is surely one, was stated thus in *Nelson v. Batson* (9 Cir., 1963), 322 F.2d 132, 135:

“Since the purpose of the doctrine of equivalents is to give the inventor an opportunity to secure a just reward for his invention — an opportunity which he



would otherwise be denied because of the failure of the language of his claim to include devices which were in fact the same as his own in function, means, and result — the degree of protection afforded *beyond* the language of the claims *will vary directly with the value of the inventor's contribution to the art*. As the principle is commonly put, the inventor is entitled to a range of equivalents *commensurate with the scope of his invention*: broad if his invention is broad; narrow if his advance is a small one in a crowded field.”

Far from following *Nelson v. Batson*, the District Court here did not give the Tuohy patent a scope even commensurate with its claim language.

*Los Angeles Art Organ Co. v. Aeolian Co.* (9 Cir., 1906), 143 Fed. 880, is a judgment of this Court splendidly illustrating what the District Court *should* have done here. This Court first stated the applicable law in these words (143 Fed., at 882):

“In order to determine what the rights of the appellees are, it is necessary to ascertain what their status in the art, under the Tremaine & Pain patent, is, whether they were pioneers in their invention, or mere improvers. If pioneers, they would be entitled to a broad and liberal construction, if, mere improvers, the claims would only be entitled to a narrower interpretation.”

Having thus set up the standard, this Court measured against it the invention of the patent in suit and concluded (143 Fed., at 883):

“This discovery was *important*. Tremaine & Pain were not mere improvers upon a prior machine which was capable of accomplishing the same general result. *They brought to success what prior inventors had been unable to accomplish*. . . . Their invention was therefore more than a mere improvement or perfection of what had preceded it. It was of such novelty

and importance as to constitute a *distinct step* in the progress of the art, and the claims of their patent are therefore entitled to a *broad and liberal construction*."

How completely the quoted passage fits the facts of this record will not, we are sure, escape this Court's notice.

The District Court made a finding (No.12a, R. 109) that Tuohy, in the Patent Office, "surrendered broader claims in order to obtain allowance of the two claims which matured as the claims of his patent" and that Plastic was therefore "estopped to assert for the Tuohy Patent any broader scope than is defined by the two claims of the Patent." The legal conclusion in that finding as to estoppel is clearly erroneous. Examination of the Tuohy file history (PX-113, 56a-95a) will show that the broader application claims Nos. 1 and 3-7 (65a-66a) that Tuohy cancelled were directed to corneal contact lenses as such, without specifying curvature. They were cancelled when the Examiner cited prior art showing that contact lenses covering only the cornea were old. (Never successful, however, before Tuohy. 209 F.2d, at 532.) Original claims 2 and 8, which called for "flatter curvature", were replaced by application claims 9 and 10 of equivalent scope, and they were allowed (91a), becoming claims 1 and 2 of the patent (8a).

In short, there is *nothing* in the Tuohy file history to indicate any narrowing by estoppel of Tuohy's right to broad coverage of the "gradually increasing clearance" concept which Judge Tolin (165 F. Supp., at 434) called "the very heart of the teaching" of Tuohy's patent. Moreover, so far as *this* case is concerned, the scope afforded by the Tuohy claim language is all that is needed to sustain Plastic's position. Tuohy's claim 1 reads word for word on modern bi-curved contact lenses with divergent peripheral curvature (Tr. 382-386).

Rather than emasculating the Tuohy patent as he did, by restricting its scope to the single-curve lens of its drawing, the District Court should have held, with Judge Tolin in the *Graham* case (165 F. Supp., at 437) that the Tuohy patent covers corneal lenses curved to provide a “small but gradually increasing clearance for the entry of natural eye fluids between the lens and the cornea”, whether or not accompanied by *extra* features, such as additional curves.

The District Court made other errors of comparable magnitude, one of which will be dealt with next. Even so, his error in misconstruing the Tuohy patent was a major error that went to the very heart of his decision. Of itself, it requires reversal of the judgment.

**II. The Butterfield Patent—Junior In Date To Tuohy And At Best A Mere Improvement Patent—Is Restricted By Its Claim Language, Its Patent Office History, And The Prior Art To Lenses Truly Conforming To The Eye Curvature Throughout Their Areas. Yet The District Court Wrongly Accorded That Patent A Broad Construction, As If It—Rather Than Tuohy—Were The Pioneer In The Art.**

Having held the pioneer Tuohy patent so restricted in scope as to cover nothing but the single-curve lens shown in its drawing, the District Court went all out the other way in construing the Butterfield patent.

Butterfield was no pioneer in any sense; he was a late-comer who made a narrow invention and secured for it an equally narrow patent. His parent application (rejected and abandoned) dated only from August 1, 1949, and the application from which the Butterfield patent actually matured was filed on August 1, 1950. By that late date the Tuohy patent, applied for in February, 1948, had already *issued*!

Butterfield, it must be said, has exploited his patent with great success, but the success has been achieved, this record shows, by aggressively misrepresenting what his patent covers. The District Court, sad to relate, accepted Butterfield's pretensions at face value. Heedless alike of Butterfield's late invention date, his Patent Office history, and the prior art, the District Court so broadly construed the Butterfield patent as to sweep within its monopoly all contact lenses approximately conforming to corneal curvature in their central zones, even though divergent therefrom in their marginal regions and hence actually covered by the Tuohy patent.

This was error:

- 1. The District Court's Construction Of The Butterfield Patent Was Forbidden By A Classical File Wrapper Estoppel, Arising From Butterfield's Progressive Abandonment And Cancellation Of Claims Directed To The Very Lens Structure He Now Pretends To Monopolize.**

A patentee may never, by resort to the doctrine of equivalents, liberal construction, or any other means, secure a judicial construction of his patent that draws within the monopoly any subject matter disclaimed in the Patent Office by abandonment, amendment, or cancellation of rejected claims. This doctrine — known as “file wrapper estoppel” — is as firmly rooted and well established as anything in patent law.

*Schriber-Schroth Co. v. Cleveland Trust Co.* (1940), 311 U.S. 211, 220-221

(“It is a rule of patent construction consistently observed that a claim in a patent as allowed must be read and interpreted with reference to claims that have been cancelled or rejected, and *the claims allowed cannot by construction be read to cover what was thus eliminated from the patent.*”)

*Exhibit Supply Co. v. Ace Patents Corp.* (1942), 315 U.S. 126, 136

(“Whatever may be the appropriate scope and application of the doctrine of equivalents, where a claim is allowed without a restrictive amendment, it has long been settled that *recourse may not be had to that doctrine to recapture claims which the patentee has surrendered by amendment.*”)

*D & H Electric Co. v. M. Stephens Mfg., Inc.* (9 Cir., 1956), 233 F.2d 879, 883-884

(“Having asserted the novelty of the right angle principle in order to secure the patent, appellant cannot now expand his coverage to include other claims which were denied him in the proceedings before the patent office. This is simply the exercise of the doctrine of ‘file wrapper estoppel’ — the gravamen of which is that an applicant who acquiesces in the rejection of his claim, and accordingly modifies it to secure its allowance, will not subsequently be allowed to expand his claim by interpretation to include the principles originally rejected or their equivalents.”)

What Butterfield disclosed in his parent application, and tried to patent therein, was simply a Tuohy lens modified by the *addition*, in the central area, of a second curve ground to conform to the cornea in its apex region. The Court may confirm this by reference to the lens shown in the parent application drawing (163a). The curve 18 of that lens obviously is the *Tuohy* curve, on a longer radius of curvature than the curvature of the underlying region of the cornea; and the curve 16 is an *additional* curve conforming to the corneal curvature in the central area.

The lens that Butterfield thus sought to patent by means of his parent application was essentially a modern contact

lens, conforming approximately to the corneal curvature in its central area and *divergent* from the corneal surface in its marginal areas, thus providing Tuohy's "small but gradually increasing clearance for the entry of natural eye fluids." The Patent Office *refused to grant Butterfield a patent on that type of lens*, holding claims drawn to such a lens "unpatentable over Tuohy" (175a); and Butterfield, acquiescing in the rejection, *abandoned the application with all its claims!*

With such facts on the public record for all to see, it is plain as day that the patent Butterfield secured could not possibly, consonant with law, be construed to embrace what Butterfield, by abandoning his parent case, admitted he could not patent. Yet Plastic's argument to that end fell on deaf ears in the District Court. Butterfield's file history was *not even mentioned* in the findings or conclusions.

Beyond any doubt the claims of Butterfield's parent application, *had they been granted to him in a patent*, would have covered like a tent the bi-curved lenses with diverging peripheral curves which are in general use today. Consider, for example, claim 10 of the parent application:

"10. A corneal contact lens of generally concavo-convex shape wherein the concave surface is substantially spherical in a central portion corresponding to the area subtended by the iris during maximum dilation, the remaining portion of the concave surface being recessed, said recess being deep enough to prevent interference between the cornea and the edge of the lens and shallow enough to allow substantial capillary attraction between the surface of the recess, the lacrimal fluid, and the surface of the cornea."

(The "recess" referred to in the claim Butterfield sought but failed to get is of course the recess formed by the

Tuohy curve 18 (163a), by virtue of its *longer radius of curvature* than that of the underlying cornea.)

The quoted claim 10, like the other claims of Butterfield's parent case, was rejected as "unpatentable over Tuohy" (175a) and *abandoned!* That being so, Butterfield cannot recapture a monopoly of the scope defined by abandoned claim 10 by eroding away the limitations from the narrow claims he did get. Cases like *D & H Electric* (9 Cir., 1956), 233 F.2d 879, hold *just that*, but their message went unheeded below.

The file wrapper estoppel that arose from abandonment of Butterfield's parent application was *renewed* in the history of the Butterfield continuation case, on which his patent issued. That continuation (DX-NN, 130a) contained a substantially different disclosure than the parent had contained; instead of a Tuohy lens supplemented by a conforming central curve, Butterfield described in the offspring case a lens having *over-all conformity* to the underlying eye surface — *i.e.*, *uniform* clearance from the corneal surface over *the entire lens area*.

This is plainly shown in the drawing of the offspring case (9a, 140a), and it is brought out with equal clarity in the claims finally allowed and issued. They all define the scope of the invention as embracing a lens having "an inner central spherical area *conforming* to the corresponding area of the cornea" and having peripheral areas "*corresponding in curvature* with that portion of the corneal peripheral area to which the lens is applied" (11a, 143a-144a).

The District Court held that "corresponding in curvature with . . . the corneal peripheral area" did not mean "conforming", in the sense of parallel or uniform spacing from the cornea, but just meant shaped so that "its mar-



ginal portion so corresponds to the marginal zone of the cornea that it provides for uninterrupted flow of tear or lachrymal fluid.” (Finding 7(b), R. 107). This, unmistakably, was error. If “corresponding in curvature with . . . the corneal peripheral area” really did mean nothing more than providing for uninterrupted flow of lachrymal fluid, the phrase would read *squarely* on Tuohy, who taught *that very thing*, years before the idea occurred to Butterfield!

The requirement of over-all conformity to eye surface was not in the claims of the offspring case when it was filed. That limitation was *added* by amendment, to distinguish over prior art.

At first Butterfield tried, even in the offspring case, to cover bi-curved lenses with divergent peripheral curves. Consider, for example, claim 6 of the second application (137a):

“6. A corneal contact lens of generally concavo-convex shape wherein the concave surface has approximately the surface of a sphere in a central portion which is somewhat less in diameter than the area of the cornea subtended by the iris during maximum dilation, the radius of curvature of said concave surface *increasing* slightly and gradually from said spherical portion to the edge of the lens.”

Note the absence of *any* requirement in that claim for conformity to eye curvature. If granted, that claim would surely have covered modern bi-curved lenses, with divergent peripheral curves. Here again, however, the Patent Office rejected all such claims as unpatentable over the prior art, noting (142a):

“The references all show it to be *old* to form ‘corneal’ contact lenses with inside peripheral curves which are flatter than those of the central area.”



Butterfield responded to that rejection by *cancelling* the claims originally presented in the offspring application and *substituting* the three claims ultimately granted, all explicitly limited to conformity in *both* the central and peripheral areas (11a, 143a-144a). That the new claims were intended to mean just what they say was established, moreover, by Butterfield's argument (146a) accompanying the newly tendered claims, in which he stated that "applicant's lens has a *posterior curvature* that *conforms* to the curvature of the cornea".

We ask — could it have been stated more plainly? Or now repudiated more cynically?

The District Court, following Butterfield's lead (R. 192), held that "conformity" and "correspondence", as used in his claims, were meant to connote mere *approximate* conformity (Finding 7(b), R. 107). But that, in the homely, expressive language of Mark Twain, just "won't wash". *Approximate* conformity was *already old*. Tuohy had taught it years before, pointing out that his lens was "*largely conforming in shape and size to the cornea*" (6a, col. 2, line 25).

Tuohy unmistakably taught that the peripheral clearance he had found advantageous in a corneal contact lens was a *small* departure from exact conformity. He wrote (7a, col. 3, line 65):

"In other words, the lens blank may *initially* have an internal radius of curvature *exactly conforming* to the radius of curvature of the cornea but on grinding the optical correction on the interior of the lens its concave radius of curvature may be so altered thereby as to provide the clearance spaces which are of adequate size. These clearance spaces *need not be great* and, for example, if the radius of curvature of the cornea measures 7.8 millimeters the radius of curvature of the concave side of the lens need only be 7.9 or possibly 8.0 millimeters."

By the late date when Butterfield was interviewing examiners in frantic search for some sort of allowable claim (1951 — see 148a), there was no room left in the art for the kind of vague boundaries that the District Court, in disregard of plain English words, read into the Butterfield claims. That patent covers *only* lenses fitted for over-all conformity — i.e., with uniform clearance between lens and eye over the whole area.

The patent *might* be properly construed to cover a lens having minute departures from over-all conformity if they reflected random irregularities in the corneal surface, as opposed to conscious design, but it could *never* be properly construed to embrace a lens deliberately *ground* to provide divergent curvature.

Justice, common sense, and the law join in forbidding such a construction, simply because Butterfield didn't *invent* such lenses and perforce didn't *patent* them.

**2. Plastic Is Free To Prove The True Legal Scope Of The Butterfield Patent, Without Estoppel From Its Butterfield License Or Restraint Arising From The Prior Litigation Settlement.**

In this section we shall deal with two errors that resulted from the District Court's adoption of unsound Butterfield arguments; the first involves an erroneous application, against Plastic, of the doctrine of licensee estoppel:

**(a) Plastic Is Under No Licensee Estoppel With Respect To The Scope Of The Butterfield Patent.**

The District Court, in Finding 12(b) (R. 109-110), found as a "fact" that Plastic, by reason of being licensed under the Butterfield patent, "is not only estopped to challenge the validity of the Butterfield Patent but is also estopped

to challenge its operative effect or utility." This same theme was repeated in the District Court's Conclusions of Law VIII and IX (R. 151-152). (Plastic, it will be recalled, has a license under the Butterfield patent, acquired in May, 1960, while Plastic was still in litigation with Solex. R. 46, 47.)

What the District Court meant by the term "operative effect" is not certain. The term, however, was suggested by Butterfield (R. 195, 245-246); and Butterfield, in argument, treated "operative effect" as equivalent to "legal scope" (R. 289-290).

If, by the findings and conclusions above noted, the District Court meant to hold that Plastic's license under the Butterfield patent estops it from showing how narrow the legal scope of the patent really is, then the District Court certainly erred.

A licensee is of course not free to challenge the licensed patent's validity, but there is no rule of law obliging him to accept his licensor's notions as to what the licensed patent *covers*. A licensee is as free as anyone else to challenge and refute a patentee's exaggerated pretensions with respect to *scope*.

The estoppel of a licensee or assignor of a patent is limited to the narrow proposition "that the invention presented a sufficient degree of utility and novelty to justify the issuance of the patent". Apart from that limitation, the Court "will apply to the patent the same rule of construction . . . which would be applicable between the patentee and a stranger." (*Westinghouse Electric & Mfg. Co. v. Formica Insulation Co.* (1924), 266 U.S. 342, 351).

That proposition has been elementary law for nearly a century. The statement quoted above was taken by the Supreme Court from the opinion of Judge (later Justice)

Lurton in *Noonan v. Chester Park Athletic Co.* (6 Cir., 1900), 99 Fed. 90, 91; the Supreme Court supported it, in the *Westinghouse* opinion, by citing many cases from other circuits, including *Leather Grille & Drapery Co. v. Christopher* (9 Cir., 1910), 182 Fed. 817, 822.

Other affirmations of the rule may be found in an opinion by Chief Justice Stone (*Scott Paper Co. v. Marcalus Mfg. Co.* (1945), 326 U.S. 249, 252-253), in an opinion by Judge Lindley of the Seventh Circuit (*Casco Products Corp. v. Sinko Tool & Mfg. Co.* (7 Cir., 1940), 116 F. 2d 119, 121), and in a recent decision by Judge Yankwich (*Blastcrete Eqmt. Co. v. Ridley & Co.* (S.D. Cal., 1959), 174 F. Supp. 277, 280).

So much for Butterfield's attempt to hobble Plastic by a pretended licensee estoppel; we now turn attention to an equally untenable Butterfield contention:

**(b) The Settlement Of The Prior Litigation Between The Parties Is NOT Evidence Relevant To The Scope Of The Butterfield Patent.**

When Plastic cleared up its litigation with Solex by purchasing that company, it inherited an already-pending lawsuit against Butterfield's company, in which, by complaint and counterclaim, both the Tuohy and Butterfield patents were in issue. That litigation was settled, in May, 1962, by execution of settlement papers and entry of a consent judgment (R. 11-28, 46-47).

By the settlement, the parties stipulated that both patents were *valid*, and that Solex (not Plastic) had infringed the Butterfield patent. There was no commitment in any of the settlement documents, however, which purported in any way to define the *scope* of either patent.

The settlement agreement (R. 16-18), after reciting that Solex had infringed the Butterfield patent, provided that “as settlement for the damages suffered . . . from and by virtue of said infringement,” Plastic would grant to Butterfield certain releases and license rights under the Tuohy patent and would pay Butterfield \$6,000 in cash.

Elsewhere in the settlement agreement, separate from the aforementioned settlement of infringement damages, Plastic agreed to pay Butterfield \$60,000, in three installments (R. 18-19).

In this present case, Butterfield argued below (R. 289-290) that Plastic’s having bought a paid-up license from Butterfield in 1960 and having paid substantial damages to Butterfield in settlement of the 1962 litigation was *evidence* of “Plastic’s continued belief that the Butterfield Patent had not only validity but substantial existing and potential trade usage.” Note the fallacy in that argument: The issue was not what Plastic *believed*; the issue was *what the patent covered*! What Plastic may or may not have *believed* in 1962 could not *possibly* affect the scope—*i.e.*, the legal boundaries—of a patent grant made in 1951.

Despite the *non sequitur* in Butterfield’s argument, it persuaded the District Court; the finding was made (Finding 23, R. 116) that the settlement papers and consent judgment “are of *significance* in considering the contentions of the parties with respect to the *scope* of the Butterfield Patent as related to the Tuohy Patent.”

That finding was clearly erroneous. It was a determination that the District Court could properly weigh Plastic’s 1962 conduct as *evidence* bearing on the legal scope of a government grant (the Butterfield patent) made *eleven years before*, in 1951. It was like holding that the bound-

aries of an estate conveyed by deed could be determined as a matter of *fact*, by drawing inferences from a stranger's later conduct, rather than as a matter of *law*, by construing the deed itself against the background circumstances of its execution!

The District Court, be it remembered, was not even dealing with an admission by a party to the deed. The scope of the Butterfield patent was being judged by the subsequent conduct of Plastic, *a stranger to the grant*!

It is self-evident, we submit, that what the District Court did was error. The scope of a patent is a matter of law, governed by the language of the claims, the file history, and the prior art against which the stature of the invention must be judged (*Del Francia v. Stanthony Corp.* (9 Cir., 1960), 278 F. 2d 745, 747). Nothing that happens *after* the patent's issuance can affect its scope except a formal action such as a statutory disclaimer by the patentee himself.

The District Court erred even in making the speculative assumption that Plastic's settlement with Butterfield indicated *belief* that the Butterfield patent had broad scope. Other explanations are more plausible. For example, the settlement could well have indicated:

(a) That Plastic was war-weary, after years of fighting a losing battle with Solex.

(b) That Plastic thought it could buy its peace from Butterfield. (If so, subsequent events surely taught Plastic otherwise, as they did Neville Chamberlain and many another would-be appeaser of a predatory enemy.)

Be that as it may, one thing is sure as a matter of law: Plastic's payment of money to Butterfield, to settle a lawsuit in 1962, was not *evidence* as to the scope of patents granted years before.

**III. Correction Of The District Court's Faulty Construction Of The Butterfield And Tuohy Patents Demands Also That The "Fact Findings" Premised Thereon Be Overturned.**

We pause for a brief exercise in elementary logic—

*Major Premise:* As just demonstrated, by reason of the prior art, its claim language, and its Patent Office history, the Butterfield patent covers only contact lenses ground to conform to eye curvature in *both* the peripheral and central areas.

*Minor Premise:* Present-day contact lenses almost invariably *diverge* from the eye curvature in their peripheral areas. (This is conclusively established by the evidence of *both* plaintiff and defendant; see pages 18-24, *supra*.)

*Conclusion:* Very few of the contact lenses being sold today are covered by the Butterfield patent.

*Corollary:* The record is barren of evidence that contact lenses covered by the Butterfield patent are being marketed in substantial quantities by anyone—except, perhaps, by Butterfield's own company.

The stated conclusion and corollary, both unquestionably true, expose the error in a host of the District Court's "findings of fact" premised on faulty construction of the Butterfield patent. In undoing the consequences of that legal error, therefore, this Court should overturn:

—The findings that the Butterfield patent covers "a very substantial volume" of present-day commercial contact lenses (Nos. 8 and 62, R. 108, 147-148).



—The finding that Plastic's licensees constituted a "substantial part of Butterfield's potential market for his license agreements" (No. 41, R. 128).

—The findings (Nos. 43, 44, and 45, R. 128-129) that substantial numbers of contact-lens manufacturers are and have been making lenses covered by the Butterfield patent, and that there is "a substantial demand in the manufacturing and fitting trade" for such lenses.

—The finding (No. 53, R. 139) that "Plastic has improperly asserted as its policy in the trade that the Butterfield patent is inoperative, highly restricted in scope and lacks utility." (There is no evidence that Plastic has ever asserted that the Butterfield patent is inoperative or wholly lacking in utility; and it truly *is*, as we have shown, highly restricted in scope, by virtue of its late date, the prior art, its narrow claim language, and its Patent Office history.)

—The finding (No. 63, R. 148) that "the Butterfield Patent has been infringed by many of Plastic's licensees". (If the Butterfield patent be given its true legal scope, there is not a scintilla of evidence supporting this finding.)

Just as the erroneous "findings of fact" above-noted were spawned by the District Court's unfounded belief that the Butterfield patent was broader in scope than it is, so other erroneous findings were founded on unduly narrow construction of the Tuohy patent. Therefore, in according to the Tuohy patent its proper status, this Court should hold clearly erroneous these additional "findings of fact":



—The finding (No. 7(e), R. 108) that the scope of the Tuohy patent is limited to lenses “whose concave surface is defined by a *single* spherical curve” of a radius longer than that of the underlying eye curvature.

—The finding (No. 53, R. 139) that Plastic has “asserted an unduly wide scope” for the Tuohy patent.

—The finding (No. 62, R. 147-148) which “expressly finds as untrue the contention of Plastic that the great bulk, if not all, of the successful corneal contact lenses fitted and sold embody the principles of the Tuohy Patent”.

Still others of the “findings of fact”, tainted by error of law as to the scope of the Butterfield patent, stand revealed as clearly erroneous when viewed in the light of Butterfield’s own evidence. Specifically, Findings 64 and 71 (R. 148, 149) state that there is no evidence of Butterfield’s (a) having asserted for his patent a scope broader than it actually has or (b) having charged manufacturers with infringement based on over-broad pretensions as to the scope of his patent.

What Butterfield and his attorneys and agents actually did—and there can be no dispute at all about this—was to represent the Butterfield patent as covering bi-curved or multi-curved lenses *regardless of conformity to eye curvature in the peripheral areas*. Sometimes these representations would pay half-way lip service to the claims by acknowledging that the patent requires conformity in the optical or central area of the lens (i.e., on “K”), and on other occasions the patent would be flatly represented to cover *all* bi-curved or multi-curved lenses, *regardless of conformity*.

For example, Butterfield testified thus (Tr. 407-408):

“Q. . . . Now, you have, have you not, Doctor, on various occasions, orally and in writing, indicated the scope of your patent to be all contact lenses in which a central zone is formed with a spherical curve to conform to the apex of the cornea and then on which the marginal portion of it is provided with a different curve than the central curve?

“A. *I think that is what the patent says.*”

In his sales talks with manufacturers, Butterfield represented the scope of his patent in these terms (Tr. 416-417):

“Q. Did you describe the area of your claim?

“A. I gave them my opinion as to what my patent covered.

“Q. And what is your opinion, Doctor?

“A. Well, my opinion is that—I started to describe my lens this morning—a lens that has a central optical area which conforms to the curvature of the cornea and has a secondary curvature surrounding it which is different than the one in the middle.”

Butterfield's agent Dippery issued infringement charges right and left with nothing to go on save the fact that the alleged infringer was making a bi-curved lens. His testimony (Tr. 235):

“Q. If you found a secondary curve on the lens, this was enough to convince you that the man who made the lens was infringing the Butterfield patent?

“A. Yes, sir.”

He did that, moreover, on the *instructions* of Butterfield himself (Tr. 205-206):

“Q. Now, before you actually started operating under the contract, did you have any further conversations with Dr. Butterfield dealing with the subject of what you should and should not say?

“A. I did.

“Q. When did those conversations occur?

“A. They occurred in our meeting at Dallas and several times by phone.

“Q. Were those occasions before and after the execution of this contract?

“A. Mostly before.

“Q. Now, what was discussed on that subject between you and Dr. Butterfield?

“A. *That anyone using a second curve or a bi-curve other than the base curve of the lens was infringing on the Butterfield patent.*”

When Butterfield’s lawyers solicited licenses in his behalf, they too over-stated the patent’s reach (Tr. 412-414; PX-143E, 118a-119a).

Of the District Court’s many erroneous findings, none was more completely contradicted by the record than Findings 64 and 71 (R. 148, 149), holding that Butterfield did not misrepresent the coverage of his patent in soliciting manufacturers to take licenses from him.

#### IV. The District Court Erred In Holding That Plastic Violated The Anti-Trust Laws By Contracting For Royalties Measured In Amount By Its Licensees' Total Sales Of Contact Lenses.

We come now to the anti-trust phase of this case. It involves the terms of Plastic's standard license contract under the Tuohy patent (18a-26a), providing that royalty be paid (on a sliding scale downward from \$1.00 per pair) on "all devices consisting of pieces of finished material in which two lens surfaces are applied thereto and which are adapted to be or are made into a finished or unfinished corneal lens". (19a-20a)

The District Court made two serious errors with respect to that royalty clause.

For one thing, the District Court held (Finding 27, R. 120-121) that the word "devices" is limited to lenses *covered by the Tuohy patent*. The District Court reached that conclusion, first, by calling Plastic's standard agreement "somewhat ambiguous, with respect to its royalty base", and stating (R. 120) that a construction should be adopted "which renders it legal and valid, rather than illegal".

That was plainly error. The clause is not ambiguous at all. The articles subject to royalty are clearly defined as quoted above and they plainly consist of *all* the corneal lenses sold by the licensee. Nothing could be plainer.

Having thus erroneously held that Plastic's royalty clause *should* be read to require payment only on lenses covered by the Tuohy patent, the District Court went on to its second error, holding (Findings 27(g)-27(k), R. 121-123) that Plastic had violated the anti-trust laws, illegally restrained trade, and competed unfairly with Butterfield by *collecting* royalties based in amount on its licensees' entire sales of lenses.

Plastic's standard royalty clause is of the type explicitly approved in *Automatic Radio Mfg. Co. v. Hazeltine Research, Inc.* (1950), 339 U.S. 827. In that case the very position the District Court adopted here was argued and *rejected*. The Supreme Court wrote (339 U.S., at 833):

"The royalty provision of the licensing agreement was sustained by the District Court and the Court of Appeals on the theory that it was a convenient mode of operation designed by the parties to avoid the necessity of determining whether each type of petitioner's product embodies any of the numerous Hazeltine patents . . . The Court of Appeals reasoned that since it would not be unlawful to agree to pay a *fixed* sum for the privilege to use patents, it was not unlawful to provide a *variable* consideration measured by a percentage of the licensee's sales for the same privilege . . . Numerous District Courts . . . have reached the same result on similar grounds, and *we are of like opinion.*"

The reasons underlying the decision in *Automatic Radio* were stated thus (339 U.S., at 834):

"We cannot say that payment of royalties according to an agreed percentage of the licensee's sales is unreasonable. Sound business judgment could indicate that such payment represents the *most convenient method* of fixing the *business value* of the privileges granted by the licensing agreement. We are not unmindful that convenience cannot justify an extension of the monopoly of the patent. . . . But as we have already indicated, *there is in this royalty provision no inherent extension of the monopoly of the patent.*"

The District Court should have followed *Automatic Radio*; its failure to do so was clearest error.

As inexplicable as the District Court's failure to cite *Automatic Radio* was its entry of this finding (No. 57(a), R. 143-144):

"There is no evidence whatsoever in the record justifying any claim by Plastic that convenience of accounting is a proper excuse for such a broad royalty basis. Plastic called no licensees and no one from its own administrative staff to testify to any difficulties which might exist in this area."

That finding is clearly erroneous. The evidence that accounting convenience is a proper basis for Plastic's royalty clause is not *lacking*. It is *compelling and conclusive*. The reason Plastic called no witnesses on that point is that Butterfield had *already proved it*.

The primary factor weighing against lens-by-lens royalty accounting on the basis of patent coverage is that the patent status of any particular lens cannot be ascertained by reference to the lens alone. How the lens relates in curvature to the eye on which it is fitted is what governs patent coverage, and information as to that is *not available* in the offices of the manufacturer-licensees. (All hands agree that lens manufacturers grind their lenses on *prescriptions*, sent in by physicians and optometrists. Tr. 307-308, 324-326.)

Since manufacturers have no way of knowing how the curves on the lenses they grind to prescription will relate to the corneal curvatures of the patients who will wear them, they cannot know from their own data whether a given lens will be covered by the Tuohy patent or any patent. This is obvious, and it stands admitted in this record (Tr. 326). It follows that an accurate lens-by-lens royalty accounting on the basis of patent coverage would require procurement, from somewhere, of data on the *eye measurements of the ultimate users*.

The expense and inconvenience of such a procedure is plain. It was so obvious to Butterfield himself that most of his recent licenses have royalty clauses *not* keyed to the number of lenses covered by the licensed patent. (See the facts gathered at pages 26-29, *supra*, and references there cited.)

Butterfield admitted that he solicited licenses calling for a monthly royalty at a bargain rate, based on the licensee's previous average monthly sales of *all* contact lenses (*not* just lenses covered by the Butterfield patent), and did so because "of simplifying their bookkeeping, simplifying my bookkeeping, simplifying the fact that I wouldn't have to send traveling auditors around, which costs money to audit their books." (Tr. 421-422; PX-84F, 38a-39a; DX-Q, 127a). *Quod erat demonstrandum*.

In the course of its general condemnation of Plastic's royalty clause, the District Court held illegal Plastic's inclusion of "unfinished" lenses in its royalty base (Findings 28-29, R. 124-125). This again was error. Since basing the royalty on the licensee's total sales of contact lenses is legal and proper, unfinished lenses — a part of that total business — may properly be included in the royalty base.

Here, as before, Butterfield confirmed by his own actions the propriety of what the District Court condemned Plastic for doing (Tr. 437-438):

"Q. Well, the point I make is that you have always charged the same royalty for uncuts as you did for finished, finished lenses; isn't that so?

"A. We have three different types of licenses.

"Q. And in all three of them there is no distinction made as far as royalty is concerned between uncuts and finished lenses; isn't that true?

"A. That's true."

The District Court plainly erred in holding that Plastic's royalty contracts violated the anti-trust laws.

**V. The District Court Erred In Condemning Plastic's Offer To Indemnify Its Licensees Against Liability For Infringement Of The Butterfield Patent.**

Butterfield complains, the Court will recall (pp. 2, 32-34, *supra*) that Plastic tortiously injured him, on December 10, 1962, by offering to indemnify its licensees in good standing against loss they might suffer as the result of actions for *infringement* of the Butterfield patent.

As in other areas, the District Court went all the way with Butterfield on this indemnity issue, finding that the offer was illegal, unjustified, and insincere (Findings 48, 49, 55, 56, 59, and 65, R. 132-133, 140-143, 146-148). The indemnity offer, held the District Court (Finding 65, R. 148), was not made in a sincere effort to protect Plastic's licensees who were not making lenses covered by the Butterfield patent, but rather was made "for the purpose of preventing Plastic licensees *making* Butterfield lenses *from dealing with Butterfield.*"

The District Court's findings and conclusions concerning this indemnity issue were founded, we believe, on misconceptions already exposed:

(a) It has been made plain that the District Court erroneously regarded the Tuohy invention as little used today, and, *contra*, the true state of things has been shown — namely, that modern contact lenses, almost universally, *do* utilize the Tuohy invention and *are* covered by the Tuohy patent.

(b) It has been shown that the Butterfield patent covers only lenses that *conform* to eye curvature in *both* their central and peripheral areas, and that there



is no evidence of such lenses being made in substantial numbers by anyone except perhaps Butterfield's own company.

Had the District Court judged this indemnity issue with correct legal perspective as to those matters, it is hardly conceivable that it would have reached the conclusion it did.

In appraising the motivation and legal basis for Plastic's indemnity offer, it is of prime importance to remember that Butterfield, for months, had been carrying on an extensive campaign of misrepresentation as to the scope of the Butterfield patent. Invariably, the patent was overbroadly touted by omission of the claim limitation requiring conformity in the marginal areas; on some occasions even the requirement of conformity in the central area went unmentioned. (See pp. 67-69, *supra*, and references there cited.)

Obviously, this was calculated to — and did — create unrest in the ranks of manufacturers, including those licensed by Plastic (DX-DD, 128a).

Viewed against that factual background — and it is the true one — the indemnity issue takes on a very different complexion than the District Court attributed to it. Plastic had good reason to believe that few if any of the lenses made by its licensees were covered by the Butterfield patent; and the damage done by Butterfield's campaign of misrepresentation was potentially great indeed. (Notably, neither before nor after Plastic's indemnity offer did Butterfield bring an action for infringement against *any* Plastic licensee, despite his having made infringement charges wholesale. The last thing Butterfield wanted was to have a court define the scope of his patent. It was more profitable to sign up timorous manufacturers by misrepresentations, threats, and pressure.)

Under the circumstances, Plastic's indemnity offer to its licensees was no more than a legitimate defensive measure against Butterfield's campaign of misrepresentation; and as such it was entirely proper. An agreement to indemnify another against the consequences of his conduct is legal, enforceable, and not against public policy when made in good faith (*Corbin On Contracts*, Vol. 6A, §1471 (1962), at pages 584-585; *Municipal Metallic Bed Mfg. Co. v. Dobbs* (1930), 253 N.Y. 313, 171 N.E. 75).

Wholly apart from the *propriety* of the indemnity offer, *there is not the slightest proof in the record that it injured Butterfield*. On the contrary, Butterfield's own evidence shows that he was *not* damaged.

Between May, 1962, when the prior litigation was settled, and December, 1962, when Plastic made its indemnity offer, Butterfield solicited twenty-six manufacturers and secured eleven new licensees. Between the first of December, 1962, and the date of trial, his batting average *went up*, with eleven new licensees secured by solicitation of only twenty-five additional manufacturers. (See page 33, *supra*, and record references there cited.)

The revenue records tell an even more impressive story. Butterfield collected royalties averaging \$2,872 per month in 1963, *after* Plastic's indemnity offer, as against \$1,703 per month in the last seven months of 1962, *before* the offer (PX-118, 113a).

On all counts, the District Court's findings and conclusions regarding Plastic's indemnity offer were contrary to the law and the record. The plain truth is that Plastic has never abused Butterfield or competed unfairly with him. The only unfair competition has been committed by Butterfield, and that has consisted of endlessly repeated false representations as to what his patent covers.

## CONCLUSION.

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There is no space for detailed argument of the District Court's lesser errors, such as the ruling that Plastic had a duty to act as Butterfield's spokesman in communications to the lens industry (Findings 46-47, R. 129-132, and pp. 32, 43, *supra*), and the ruling that Plastic acted without probable cause in charging Butterfield and his counsel with conspiracy (Findings 51, 52, 68, R. 134-139, 149; and see pp. 37-38 and 44, *supra*). The facts regarding those matters have been set forth, and they reveal the error in the rulings, we believe, without need for argumentative embellishment.

Broadly viewed, the nub of this case is that the Tuohy invention is the basic one on which the corneal contact-lens industry was built, and on which it still depends for success. Plastic, owner of the Tuohy patent, is no ogre; since it bought out Solex, it has encouraged competition by cutting the Tuohy patent royalties to a fraction of their former level and making licenses available to everyone.

Butterfield made a narrow invention and secured a narrow patent, which he has exploited successfully indeed. But, sad to say, by persistently and repeatedly misrepresenting what it covers. This controversy exists *only* because Butterfield *insists* on repudiating the admission he made to the Patent Office (146a) that the lens of his patent "has a *posterior curvature* that *conforms* to the curvature of the cornea".

The judgment should be reversed and the cause remanded, with directions (a) to dismiss the complaint for want of merit and (b) to enjoin Butterfield, on Plastic's counterclaim, from misrepresenting in the future the legal scope of the Butterfield patent.

Respectfully submitted,

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I certify that, in connection with the preparation of this brief, I have examined Rules 18 and 19 of the United States Court of Appeals for the Ninth Circuit, and that, in my opinion, the foregoing brief is in full compliance with those rules.

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*One of the Attorneys  
for Appellant*

## APPENDIX



## APPELLANT'S APPENDIX FOR EXHIBITS

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In resolving the pivotal issues of law and ultimate fact in this case, the Court will find it important to be thoroughly familiar with certain key exhibits, especially the patents of the respective parties and their file histories.

For the Court's convenience, therefore, we have reproduced those and other key exhibits in this appendix, to make them easily accessible when appellant's brief is being read.

In compliance with Rule 18(f), this appendix begins with a complete table of all the exhibits in the record. Following that is the text of the specific exhibits wholly or partially reproduced herein, an index of which is provided at the end of the Table of Contents in the front of the brief.

## COMPLETE TABLE OF EXHIBITS IN THE RECORD

<u>Plaintiff's Exhibit No.</u>	<u>Identified</u>	<u>Offered</u>	<u>Received</u>
1	66	67	67
2	66	67	67
3	67	67	67
4	68	68	68
5	69	70	70
6	71	71	71
7	77	77	77
8	78	78	78
9	79	79	82
10	82	82	82
12	83	84	84
13 to 68	87-88	91	95,476*
69	109	109	110
70	110	110	110
71	110	110	111
72	263	263	263
73	111	111	111
74	112	112	112
75	112	112	113
76	113	113	113
77	114	114	114
80 to 97AL	114-115	115	263
98	116	116	117
100	118	118	118
101	118	119	474
101A to 101W	120	120	257,477
102	121	121	121
102A to 102K	121	121	122
103	123	123	124
104A to 104Y	368-370	371	372
106 to 108	125	125	126
109	126	126	126
110	126	126	127

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\* Ruling reserved on Pl. Exs. 66 and 67 (Tr. 94, 476).



<u>Plaintiff's Exhibit No.</u>	<u>Identified</u>	<u>Offered</u>	<u>Received</u>
111	127	127	127
112	127	127	127
113	127	128	128
114	128	128	129
115	129	130	130
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119 and 120	132	132	132
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123	673	673	674
124	133	133	134
125	178	178	178
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127	135	135	135
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131	137	137	137
132	137	137	137
133	138	138	138
134	138	138	138
135	138	138	138
136	139	140	140
137A	141	141	141
137B	141	142	142
138	142	142	142
139	142	142	143
140	143	143	143
141	143	143	144
142	144	144	144
143A to 143G	145	145	145
144	145-146	496	497
146	148	148	149, 430
147	149	149	150
148	150	150	151
149	149	149	474
151	295	295	295

<u>Defendant's Exhibit No.</u>	<u>Identified</u>	<u>Offered</u>	<u>Received</u>
A	155	155	155
B	567	568	568
C	568	568	568
D	568	568	568
E	570	570	572
F	411	573	573
I	575	575	575
L	413	573	573
O to S	584	584	585
T	589	589	589
U	573	573	573
V	589	589	590
W	590	590	590
X	590	590	591
Y	590	590	591
Z	591	591	591
AA to DD	592	592	593
EE	595	595	595
FF	442	573	573
HH	596	597	597
II	597	597	597
JJ-1	548	549	549
KK	598	599	599
LL	574	574	574
NN	599	600	600
OO	379	381	381
PP	573	573	573
QQ	650	656	657
RR	650	656	657

PLAINTIFF'S EXHIBIT No. 43

PLT Exhibit # 43 <i>Recd</i>	
Case	63-294
	Rptr <i>JB</i>
Date	6/22/64 Clerk <i>cm</i>

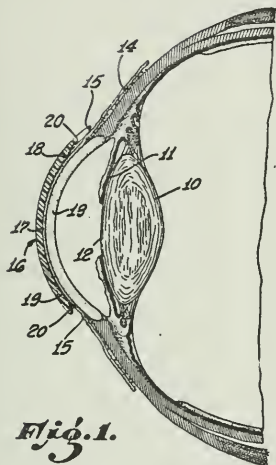
June 6, 1950

K. M. TUOHY

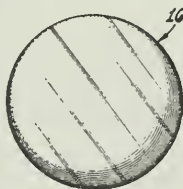
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CONTACT LENS

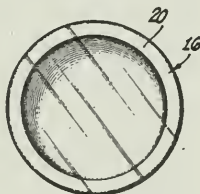
Filed Feb. 28, 1948



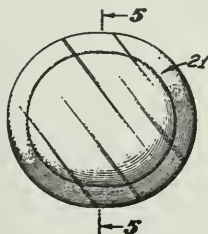
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Fig. 5.*

INVENTOR,  
*Kevin M. Tuohy*  
 BY *Hazard & Miller*  
 ATTORNEYS.

Patented June 8, 1950

2,510,438

## UNITED STATES PATENT OFFICE

2,510,438

## CONTACT LENS

Kevin M. Tuohy, Los Angeles, Calif., assignor to  
Solex Laboratories, Inc., Los Angeles, Calif., a  
corporation of California

Application February 28, 1948, Serial No. 12,040

2 Claims. (Cl. 38-54)

1

This invention relates to a contact lens adapted to be applied to the human eye for the primary purpose of correcting deficient vision.

Heretofore contact lenses have been produced that have been made of either glass or synthetic resin plastics which have portions resting directly on the cornea of the eye with a supporting flange or border resting on the scleral portion of the eye or which have central portions arching over the cornea and which have flange or border portions designed to extend beyond the limbus of the eye. The optical correction has been ground on that portion of the contact lens disposed over the cornea and fluids compatible with the eye tissue have generally been interposed between the lens and the eye. Such contact lenses have had a number of objections which have, either collectively or individually, retarded their general use. Among these objections are (1) the time and skill required to properly fit the lenses to the eyes of the patient; (2) the lack of comfort which prevents such contact lenses from being worn continuously longer than only relatively short times; (3) the development of the appearance of rainbows or halos, particularly around bright light sources and the clouding of the vision after the lenses have been worn for a relatively short time; and (4) the necessity of determining and then using fluids with the contact lenses which are compatible with the eye tissues of the user.

I have ascertained that one important source of these objections is occasioned by the fact that the contact lenses heretofore devised universally engage the scleral portion of the eye so that the pressure of the flange or border portion of the contact lens on the scleral portion not only applies objectionable pressure to the nerves in the eye but retards the normal blood flow through the veins in the scleral position. The pressure on the nerves and the retarding of the normal blood flow is conducive to the development of irritation and is a principal reason for the appearance of the objectionable rainbows, halos and cloudiness. The contact lenses heretofore developed, even when removed for the purpose of resting the eye, do not bring about immediate relief on removal and, due to the fact that they cover such a wide expanse of the eye, they must be fitted with a relatively high degree of accuracy by one who is highly skilled in this type of work. With the use of contact lenses which extend beyond the limbus portion the eye is almost completely covered and with the fluid sealing off all possi-

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bility of air and natural eye fluids the eye soon becomes exhausted.

An object of the present invention is to provide an improved contact lens which is characterized by the fact that when properly fitted to the eye of the person for which it was designed its maximum dimensions will be less than the dimensions across the limbus at the edges of the cornea. In the preferred arrangement, the contact lens embodying the present invention is smaller in size than the iris but larger than the maximum pupil opening. This is particularly true when the lens and the iris are considered along the horizontal meridian. When considered on the vertical meridian the lens may exceed the iris slightly but still should be within the limbus. In this manner as the lens normally does not engage the sclera, the sclera is exposed to air and natural eye fluids and is not subjected to the objections arising from pressures applied thereto.

A further important characteristic of the improved lens resides in the fact that although it is in the nature of a concavo-convex section of transparent material largely conforming in shape and size to the cornea of a given eye, the inside or concave surface actually is slightly flatter or may be regarded as having a slightly greater radius of curvature than the cornea. In this manner the lens may actually contact the cornea near the center of the lens while the portions of the lens adjacent its margin are slightly spaced therefrom. This space affords an opportunity for the natural eye fluids to enter and relieves pressure on the cornea. Although blinking of the eyelids may displace the lens from over the cornea temporarily so that its edges may extend across the limbus and even onto the sclera, the minimum contact between the lens and the cornea occasioned by this relation of curvatures is such as to reduce the irritation, if any is present, to a minimum.

With the foregoing and other objects in view, which will be made manifest in the following detailed description and specifically pointed out in the appended claims, reference is had to the accompanying drawings for an illustrative embodiment of the invention, wherein:

Figure 1 is a vertical section on an enlarged scale through the forward portion of a human eye illustrating a contact lens embodying the present invention in applied position thereon;

Figure 2 is a front view in elevation of the contact lens illustrated in Figure 1;

Figure 3 is a rear view in elevation of the same;

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Figure 4 is a front view in elevation of a slightly modified form of construction; and Figure 5 is a vertical section taken substantially upon the line 5-5 upon Figure 4.

Referring to the accompanying drawings wherein similar reference characters designate similar parts throughout, in Fig. 1 the lens of the eye is indicated at 10 over which there is the iris 11 which defines the pupil 12. The cornea is generally indicated at 13 and the sclera generally indicated at 14. The limbus portion which defines the sclera from the cornea is indicated at 15.

The contact lens embodying the present invention consists of a concavo-convex section 16 of any suitable transparent or semi-transparent material. This material may be optical glass or, in conformity with conventional practice, it may be a synthetic resin plastic of the type now generally being employed in the manufacture of contact lenses. The material in the usual situation may be perfectly transparent but in some instances it may be slightly darkened or tinted either for glare-reducing purposes or to enhance or modify the natural color of the iris 11 in securing desired cosmetic effects.

This section will, of course, vary in size and shape to conform to the particular eye to which it is fitted but in embodying the present invention it possesses the following characteristics. The maximum dimension such as the diameter of the lens is less than the corresponding dimension of the iris so that the margins of the lens when in the normal applied position are within the iris 11. However, the lens is not so small that it will not completely cover the pupil 12 when the iris 11 is in its fully opened position. The lens may, therefore, be defined as to size as being within the limbus of the eye but beyond the maximum opening of the iris. Another characteristic of the lens is that it has a radius of curvature slightly greater than the radius of curvature of the cornea to which it is applied or, in other words, the lens is slightly flatter on its concave side than the convexity of the cornea. In this manner the major portion of the contact between the lens and the cornea will occur near the center of the cornea or in the neighborhood of the location indicated at 17, whereas at the top and bottom of the lens, as well as at the two sides there will be slight clearance spaces 18 and 19. I find it advisable to have a slight difference between the radius of curvature of the concave side of the lens and the convex surface of the cornea so as to reduce irritation. The clearance spaces 18 and 19, as well as the clearance spaces at the sides of the lens, enable the natural eye fluids to enter between the lens and the cornea which is, of course, desirable. The presence of this fluid in these clearance spaces probably contributes to the holding of the lens in place on the cornea such as by capillary action. The optical correction may be ground either on the interior or exterior surface of the lens 16 or both, and in some instances the optical correction ground on the interior surface of the lens is adequate to provide the clearance spaces 18 and 19. In other words, the lens blank may initially have an internal radius of curvature exactly conforming to the radius of curvature of the cornea but on grinding the optical correction on the interior of the lens its concave radius of curvature may be so altered thereby as to provide the clearance spaces which are of adequate size. These clearance spaces need not be great and, for example, if the radius of curvature of the cornea measures

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7.8 millimeters the radius of curvature of the concave side of the lens need only be 7.9 or possibly 8.0 millimeters.

I find it advantageous in the usual lens to bevel the concave surface adjacent the margins, as indicated at 20. When the lens is in applied position on the eye the eyelid, in blinking or closing thereof, will tend to disturb the position of the lens on the cornea. Usually most of this disturbance is created by the upper eyelid which, on opening, may tend to lift the lens from the full line position shown in Fig. 1 to a dotted line position therein and, as illustrated in the dotted line position the lens may be temporarily shifted upwardly so that it has crossed over the limbus portion 15 and may even extend partially onto the sclera 14. This displacement of the lens is usually only temporary and subsequent blinking or closing of the eyelid will tend to restore the lens to its centralized position with relation to the cornea. As the limbus portion 15 usually protrudes slightly the internal bevel 20 facilitates the slipping of the lens thereover so that when displacement of the lens does take place it may occur without causing irritation. When the lens is returned to the cornea in the course of subsequent blinking, it tends to centralize itself thereon.

Any necessary correction may be ground on the surfaces of the lens and in some instances the correction required is such that the lens must be either relatively thick or have relatively thick margins. Where the lens is thick or has thick margins the external or convex surface may be beveled as indicated at 21 to facilitate the passing of the conjunctiva of the eyelids thereover. Both bevels 20 and 21 should be relatively small and should be confined to the distance between the maximum opening of the iris and the limbus portion 15 so that the user under no circumstances will look through a beveled portion of the lens.

In Fig. 4 a slightly modified form of construction is illustrated wherein the lens, instead of being circular in form, is slightly ovate or elliptical. The lens may be given any shape required to properly fit the size and shape of the cornea to which it is applied.

It will be noted from the above described construction that the improved contact lens is relatively simple. A feature of its construction resides in the fact that in its normal position shown in Fig. 1 no portion of the lens contacts the sclera and consequently the irritation generally produced when contact lenses are pressing against the sclera is entirely avoided. Furthermore, the prescribing of lenses of this character is greatly simplified. Whereas heretofore it has generally been necessary to form a mold of the eye to determine the size and shape of the cornea and the size and shape of the surrounding sclera, in the present construction the size and shape of the sclera becomes relatively immaterial. The prescription for the required correction can be determined in the usual manner and the corneal portion of the eye can then be measured both horizontally and vertically by any conventional measuring instrument used for this purpose. With the measurements of the cornea known both as to height, width and radius of curvature and the required correction known, a lens manufacturer can easily fill a prescription for contact lenses with reasonable assurance that the lens will fit the patient properly. In so doing his skill and judgment may be required in determining whether or not a lens blank having a larger in-

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5 ternal radius of curvature than that of the cornea shall be used or whether the lens may have the same internal radius of curvature and the correction ground on the inside of the lens be relied upon to form these clearances. In the use of the improved lens it is unnecessary to try repeatedly and reject various solutions or fluids before wear-  
 10 ing time can be gained inasmuch as no solution need be used at all with the present lens. However, in applying the lens embodying the present invention it is frequently advisable to moisten its surfaces so that at the time of initial applica-  
 15 tion there will not be any discomfort particularly of the eyelids. No special fluid or solution is required for this purpose and ordinary water not harmful to the eye may be employed to moisten the lens. When the lens is worn its presence can rarely be detected. Even the bevels at the margins of the lens can rarely be detected due to the fact that they are within the iris portion, the edges of the lens particularly at the sides of the iris being backgrounded by the colored iris and to a large extent undiscernible and although the lens at the top and bottom of the iris pro-  
 20 jects or slides beyond the iris these portions are normally concealed by the upper and lower eyelids.

I find that lenses of this character can be worn over prolonged periods of time—periods of twelve and thirteen hours of continuous use being not unusual—without causing objectionable irrita-  
 25 tion and without causing cloudiness or rainbow and halo effects which are frequently produced with the usual contact lens in very much shorter periods of time.

I find it advisable to mark the lenses so as to be able to distinguish the lens for the right eye from the lens for the left eye and to indicate which side of the lens should be positioned uppermost and lowermost as the case may be. Such markings may be very small and when applied should be applied very close to the margin of the lens and if the lens is beveled they should be ap-  
 30 plied to a bevel.

Various changes may be made in the details of construction without departing from the spirit and scope of the invention as defined by the ap-  
 35 pended claims.

I claim:

1. A contact lens applicable to the human eye comprising a concavo-convex lens formed of light-transmitting material having a marginal size smaller than the limbus portion of the eye to which it is applicable but larger than the maxi-  
 40 mum iris opening, said lens having a radius of

curvature on its concave side slightly greater than the radius of curvature of the cornea to which it is applied so that radially from the center of the lens there will be a small but gradually increasing clearance for the entry of natural eye fluids between the lens and the cornea, said lens being ground to correct for visual deficiency.

2. A contact lens applicable to the human eye comprising a concavo-convex lens formed of light-transmitting material having a marginal size smaller than the limbus portion of the eye to which it is applicable but larger than the maximum iris opening, said lens having a radius of curvature on its concave side slightly greater than the radius of curvature of the cornea to which it is applied so that radially from the center of the lens there will be a small but gradually increasing clearance for the entry of natural eye fluids between the lens and the cornea, said lens being ground to correct for visual deficiency and having a bevel at its marginal edges on the con-  
 45 cave side thereof.

KEVIN M. TUOHY.

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PLAINTIFF'S EXHIBIT No. 45

PL 117	Exhibit # 45	Reel
Case	63-294	
Date	6/22/64	Clerk CPM

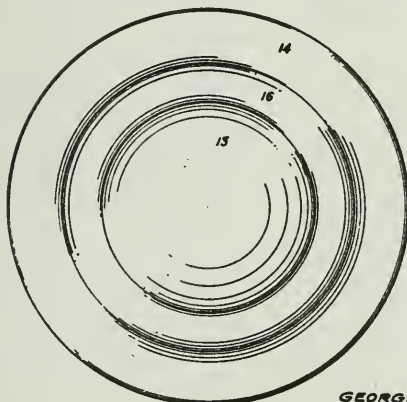
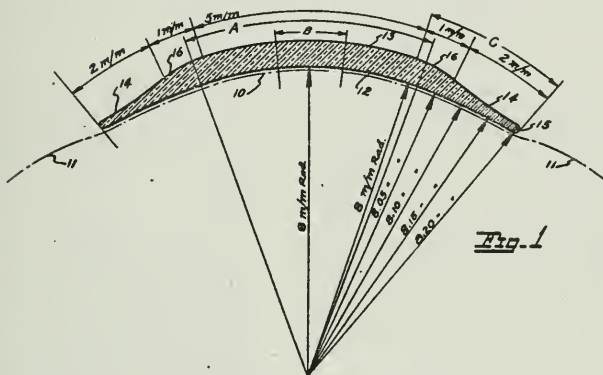
March 6, 1951

G. H. BUTTERFIELD

2,544,246

CORNEAL CONTACT LENS

Filed Aug. 1, 1950



GEORGE H. BUTTERFIELD  
INVENTOR.

Fig. 2

BY

*James O. Sivan*  
ATTY

Patented Mar. 6, 1951

2,544,246

## UNITED STATES PATENT OFFICE

2,544,246

## CORNEAL CONTACT LENS

George H. Butterfield, Portland, Oreg.

Application August 1, 1950, Serial No. 177,050

3 Claims. (Cl. 88-54.5)

1

This invention is a continuation in part of my application S. N. 107,948 filed August 1, 1949 and relates to contact lenses and more particularly to a contact lens that covers the corneal region of the eye.

The conventional contact lens, that is, the contact lens which has a scleral flange molded to fit the eyeball has many limitations. Not the least among these is the fact that the wearing time is quite short; a few hours' wear causes a corneal misting or halation brought about presumably by the pressure of the lens cutting off blood circulation in the limbal region and the prevention of free flow of lacrimal fluid. Other factors preventing this lens from coming into wide use are the need for a special accessory fluid between the lens and the eye. In addition, the difficulties of fitting them to the individual eyeball are apparent and well-recognized. For that reason, a practical corneal lens has been much sought after. In theory, the corneal lens is the ideal method of correcting visual deficiencies, since it does not touch the limbal region, needs no accessory fluid, and has other beneficial optical properties known to workers in the art.

The applicant, in his invention, has provided a corneal lens which can be worn continuously throughout the full waking day by the average person without experiencing corneal blurring or discomfort of any kind.

Furthermore, the lens of the applicant overcomes a common deficiency of corneal lenses, that is, their tendency to fall away from the eyeball due to insufficient surface tension or capillary attraction or due to the eyelid lifting the lens away from the cornea.

In addition, the applicant has provided a contact lens which needs no accessory fluid, which does not give the eye a bulging appearance, which is perfect from the viewpoint of cosmetology and ophthalmology, which is self-cleaning, which is easy to fit, which is free of marginal aberrations, which can be used by persons with pathological conditions of the cornea, and which may be easily and inexpensively manufactured.

With the above objects in view, as well as others which will appear as the specification proceeds, the invention comprises the construction, arrangement, and combination of parts as now to be more fully described and as hereinafter to be specifically claimed, it being understood that the disclosure is merely illustrative and intended in no way in a limiting sense, changes in details of construction and arrangement of parts being permissible so long as within the spirit of the

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invention and the scope of the claims which follow.

In the accompanying drawings:

Figure 1 shows a greatly enlarged sectional view of the lens of the present invention taken through the center thereof.

Figure 2 shows a greatly enlarged view of the anterior, convex face of the lens of the instant invention.

Referring to Figure 1, the lens which may be made of methyl methacrylate or similar substances is shown in conjunction with a human eyeball, shown in broken lines. The reference character 10 designates the surface of the cornea while the limbal region is designated 11. Generally speaking, the lens of the applicant is of concavo-convex type and consists of a posterior, concave side 12 and an anterior, convex side 13. The concave side 12 is of a perfectly spherical shape over the central area of the lens indicated by the dimension 5 mm. It is to be noted that, the lens shown in the drawing is provided with dimensions; these dimensions are given to show the relative proportionalities between the parts of the lens. The particular lens shown is illustrative of a lens particularly made for a person having a cornea whose radius of curvature in the central portion is 8 mm. The diameter of the central area designated by the dimension 5 mm. is slightly smaller than the maximum diameter of the pupil, the latter diameter being indicated by the dimensional character A. The convex side 13 of the lens is formed in the central portion with the curvature needed to supply the needed visual correction to the eye; the area that is thus formed is also slightly less in diameter than the maximum diameter of the pupil. The area subtended by the pupil in its minimum contracted condition is indicated by the character B. The curvature of the concave side 12 of the lens changes as the point on the surface is further from the center of the lens; at the edge of the area indicated by the 5 mm. dimension the radius of curvature becomes progressively greater until it reaches a maximum at the outer edge 14 of the lens. In the preferred embodiment shown in the drawing, the radius of curvature increases by  $2\frac{1}{2}\%$  from the central spherical area to the edge 14. The outside diameter of the lens must, of course, be such that the lens may lie on the surface of the cornea 10 within the area defined by the limbus 11. Actually, the concave side 12 of the lens approximates the surface of a paraboloid for a reason to be discussed later.

The anterior or convex side 13 of the lens is



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formed with a rim portion 14 adjacent to the edge 15. This rim portion is relatively thin and its surface is generally parallel to the surface of the concave side throughout its extent. The rim portion 14 can be said to extend approximately 2 mm. inwardly of the edge 15 and it is indicated by the dimension 2 mm. Between the central vision-correcting portion of the convex side of the lens and the rim portion 15 is a transition area indicated by the dimension 1 mm. This transition area has a smoothly curved surface leading from the thick central part of the lens to the thin outer part and should be such as to present no abrupt changes in contour that may be engaged by the conjunctiva of the eyelid causing displacement of the lenses. The outer edge 15 of the lens is formed as a smoothly rounded surface.

The operation of the lens is based on the fact that the average human cornea is not exactly spherical, but actually is more like a paraboloid, with the central, visual portion being a sphere to all intents and purposes, but with the radius of curvature becoming greater as one leaves the visual area and progresses outwardly toward the limbus.

Yet, in the past, all corneal lenses have been made on the theory that the cornea was spherical throughout and the concave side of the lens has been made spherical also. It can be seen that, if a spherically surfaced lens is used on a paraboloidal cornea, the lens will necessarily contact the cornea at the conus and at the edge. Now, the sphere and the paraboloid are quite similar at the conus and no undue pressure takes place; at the edge, however, the pressure is great enough to cause discomfort and blurring. If the spherical surface of the lens in such a case is chosen large enough to prevent this localized pressure, the lens will be too loose and will easily separate from the cornea because of insufficient capillary attraction and because there will necessarily be a large space between the cornea and the edge of the lens and the eyelid will slip under the lens and lift it.

Now, the theory behind all corneal contact lenses is that the lens be so formed that it can ride on a film of lacrimal fluid which exists between cornea and contact lens; if the lens does not float on such a film or causes a local pressure, there will be discomfort, halation, and the like and if the space between lens and cornea is too great, the capillary attraction will not exist and the lens may fall away from the eye. The applicant, by providing a lens whose contact surface is very close to the shape of the eyeball, has brought about the ideal corneal contact lens condition.

Since none of the lens outside of the area of the maximum extension of the pupil, designated A in the drawing, is to be used for overcoming the sight deficiency and is only present to prevent the maximum contact area between lens and cornea for maximum capillary attraction, it is possible for the applicant to use the non-visual area in a way to best overcome the past deficiencies of corneal contact lenses. The particular shape provided allows the eyelid to slide smoothly over the edge of the lens. The result

is that there is no pain or sensation in the eyelid, and there is no opportunity for the eyelid to pry the lens away from the cornea.

I claim:

1. A corneal contact lens of concavo-convex form in section and of a size to lie within the area defined by the limbus having an inner central spherical area conforming to the corresponding area of the cornea to which the lens is applied so that undue pressure will not be present at any point, the remainder of said inner surface extending radially outward toward the limbus being formed on a curve different from that of said central area and corresponding in curvature with that portion of the corneal peripheral area to which the lens is applied, whereby space is provided for the natural uninterrupted circulation of lacrimal fluids between said lens and the cornea.

2. A corneal contact lens as in claim 1 wherein the anterior marginal area is gradually reduced in thickness toward the periphery of the lens by an arcuate facing in reverse curvature to the convex surface of the lens, both the junction of said arcuate facing with the remaining central convex portion and the lens edge having a smooth transition whereby the eyelids may pass freely over said edge.

3. A corneal contact lens as in claim 1 wherein the anterior marginal area is gradually reduced in thickness toward the periphery of the lens by a concave facing in reverse curvature to the convex surface of the lens, both the junction of said concave facing with the remaining central convex portion and the lens edge having a smooth transition whereby the eyelids may pass freely over said edge.

GEORGE H. BUTTERFIELD.

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The following references are of record in the file of this patent:

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Number	Name	Date
2,510,438	Tuohy	June 6, 1950

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Number	Country	Date
805,592	France	Aug. 31, 1936

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## PLAINTIFF'S EXHIBIT No. 46 (Excerpt)

*(Excerpt From Pl. Ex. 46: Typical Early License Agreement Under Tuohy Patent As Granted By Solex)*

## NON-EXCLUSIVE LICENSE

THIS AGREEMENT made and entered into in duplicate by and between SOLEX LABORATORIES, INC., a corporation of the State of California, having its principal place of business at 530 North La Cienega Blvd., Los Angeles 48, California, hereinafter referred to as SOLEX, and CENTRAL CONTACT LENS COMPANY, INC., having its principal place of business at P. O. Box 526 Mobile, Alabama, hereinafter referred to as CENTRAL. WITNESSETH:

WHEREAS, SOLEX represents and warrants that it is the owner of United States Letters Patent No. 2,510,438, issued June 6, 1950, for "CONTACT LENS", to Kevin M. Tuohy;

WHEREAS, CENTRAL is desirous of acquiring a non-exclusive license to manufacture and sell lenses embodying the invention of said Letters Patent throughout the United States and its territories for the remainder of the term of said Letters Patent and reissues or extensions thereof.

NOW, THEREFORE, in consideration of the covenants hereinafter expressed, the parties hereto agree as follows:

## I.

SOLEX hereby grants to CENTRAL a non-exclusive license to manufacture and sell lenses embodying the invention of said United States Letters Patent No. 2,510,438, throughout the United States and its territories, and elsewhere throughout the world, for the remainder of the term

for which said Letters Patent have been granted and including all reissues or extensions thereof, subject to the faithful performance by CENTRAL of the following terms and conditions:

2.

CENTRAL agrees to pay to SOLEX a royalty of Three Dollars and Fifty Cents (\$3.50) per pair, or One Dollar and Seventy Five Cents (\$1.75) per single lens on all finished lenses manufactured and sold by CENTRAL and covered by Tuohy Patent No. 2,510,438 or which would contributorily infringe said patent; and a royalty on all unfinished lenses manufactured and sold by CENTRAL under said Tuohy patent, or which would contributorily infringe said patent in accordance with the following schedule:

\$2.00 on the first	50,000 pair	or \$1.00	per lens
\$1.00 on the next	50,000 pair	or \$ .50	per lens
\$ .75 on the next	100,000 pair	or \$ .375	per lens
\$ .50 on the next	100,000 pair	or \$ .25	per lens
\$ .25 on all additional	pair	or \$ .125	per lens

CENTRAL shall not pay royalties to SOLEX on lenses purchased from SOLEX or from a direct licensee of SOLEX, but such lenses shall not be counted in the total number of lenses sold by CENTRAL under the schedule hereinabove.

3.

On or before the 20th day of each calendar month, CENTRAL agrees to supply to SOLEX a true written statement setting forth the total number of lenses embodying the invention of said Letters Patent that have been manufactured and sold, or caused to be manufactured and sold by CENTRAL during the preceding calendar month

and shall pay to SOLEX the royalty or royalties set forth in Paragraph 2 hereof upon which payment has been made to CENTRAL.

4.

CENTRAL agrees to keep true and accurate records of accounts including copies of invoices and to hold the same open to the inspection by SOLEX or its duly authorized representatives during all business hours for purposes of audit, and agrees to make available at such times of inspection all records pertaining to purchases or acquisitions of material used in the manufacture of the lenses under this license and all labor records pertaining to the amount of labor expended in the manufacture of lenses under this license.

5.

CENTRAL agrees to apply to the container in which the lenses manufactured under this license are sold an appropriate designation indicating that the same are manufactured and sold under license under United States Letters Patent No. 2,510,438.

6.

CENTRAL hereby acknowledges the validity of said U. S. Letters Patent No. 2,510,438 for the entire term for which said Letters Patent have been granted and any reissues or extensions thereof, and agrees to refrain from either directly or indirectly attacking the validity of said Letters Patent.

7.

In the event the said patent shall be held invalid by any circuit court of appeals in the United States, or by any United States district court from which an appeal is taken

by SOLEX, then CENTRAL shall have the right to place in escrow any royalties accrued after such adverse decision until there has been a final determination of the question of validity, or any adverse decision on validity by the Supreme Court of the United States. However, any royalties which have been earned up to the time of such adverse decision by a circuit court of appeals or a district court from which no appeal is taken, shall be due and payable by CENTRAL to SOLEX. In the event royalties are escrowed as provided above and the validity of the patent is upheld, then such escrowed royalties shall promptly be paid to SOLEX, and if the patent is held invalid as provided above, then such escrowed royalties shall be paid back to CENTRAL.

## 8.

Nothing herein contained refers to or constitutes any settlement for past infringement, if any, that may have been committed by CENTRAL. Settlement for past infringement shall be subject to a separate agreement to be negotiated between the parties.

## 9.

SOLEX agrees that in the event it should grant a license to another person, manufacturer or corporation under said patent in an agreement upon terms and conditions more favorable than those herein accorded, except for the manner of settlement for past infringement, SOLEX shall promptly give CENTRAL the benefit of such more favorable terms and provisions.

## 10.

CENTRAL agrees that in the event of bankruptcy, insolvency or the appointment of a receiver or trustee, or

for conserving or distributing its assets for the benefit of creditors, then this agreement shall cease and terminate without notice as of one day prior to such event, and any and all rights of every kind and nature whatsoever which have been herein granted by SOLEX to CENTRAL shall automatically revert to SOLEX, the same as though this agreement had not been entered into.

11.

CENTRAL shall have the right hereunder to grant sub-licenses to other manufacturers subject to the terms of this agreement and CENTRAL shall be liable to SOLEX for royalties for the sale of lenses sold under said sub-licenses in the amounts set forth in Paragraph 2.

If sub-licenses are granted by CENTRAL and all of the production of such sub-licensee or sub-licensees is sold by CENTRAL, then the aggregate of the production of such sub-licensee or sub-licensees shall be considered in determining the number of lenses sold by CENTRAL according to the schedule in Paragraph 2, hereof, and CENTRAL shall pay royalties thereon according to said schedule.

If sub-licensees make sales of lenses covered by or contributorily infringing said Tuohy Patent No. 2,510,438 to others than CENTRAL, such sales of lenses shall not be considered in determining royalties payable by CENTRAL to SOLEX. Such other sales by sub-licensees than CENTRAL shall alone be considered by the sub-licensees in determining royalties payable by them to SOLEX under the royalty schedule of Paragraph 2.

12.

In the event CENTRAL shall be in default in connection with any of the covenants and/or conditions under

which it is liable under this license, then SOLEX shall have the right to cancel this agreement upon the termination of a sixty (60) day written notice sent by registered mail, return receipt requested, to CENTRAL at its then known address; it being provided however that should the default be corrected within such sixty (60) day notice period, then this agreement shall remain in full force and effect, the same as if no notice had been given. Termination of this agreement as provided for herein shall not relieve CENTRAL of its obligation to pay all royalties that may have accrued prior to the effective date of termination, or on sales made by CENTRAL prior to such effective date of termination, and upon which payment for lenses is made subsequent to the effective date of termination.

THIS AGREEMENT shall be binding upon and inure to the benefit of the successors and assigns of the parties thereto, but shall not be assignable by CENTRAL except in connection with the transfer of the entire business and good will of CENTRAL as it is related to the manufacture and/or sale of corneal lenses.

14.

The effective date of this agreement is July 6, 1960.

SOLEX LABORATORIES, INC.

By /s/ Kevin M. Tuohy

President

CENTRAL CONTACT LENS COMPANY, INC.

Name of Company

By /s/ Cecil R. Shaffer

Officer



## PLAINTIFF'S EXHIBIT No. 46 (Excerpt)

*(Excerpt From Pl. Ex. 46: Form Of License Agreement  
Currently Used By Plastic In Licensing The Tuohy Patent)*

## NON-EXCLUSIVE LICENSE AGREEMENT

THIS AGREEMENT made and entered into this .....  
day of ..... 19 ...., in duplicate, by and between  
The Plastic Contact Lens Co., a corporation of the State  
of Illinois, having its principal place of business at 18  
South Michigan Avenue, Chicago 3, Illinois, hereinafter  
referred to as LICENSOR, and .....  
.....,  
having a principal place of business at .....  
....., hereinafter referred to as  
LICENSEE:

## WITNESSETH:

WHEREAS, LICENSOR represents and warrants that  
it is the owner of United States Letters Patent No.  
2,510,438, issued June 6, 1950 for "CONTACT LENS" to  
Keven M. Tuohy, and has the right to grant licenses under  
United States Patent Application Serial No. 701,153, filed  
December 6, 1957, and has the right to grant a valid  
license to LICENSEE as hereinafter set out; and

WHEREAS, LICENSEE is desirous of acquiring a  
non-exclusive license to manufacture and sell devices as  
hereinafter defined throughout the United States and its  
territories for the remainder of the term of said Letters  
Patent, application, Letters Patent which may issue as a  
result of said application, and reissues thereof:

NOW, THEREFORE, in consideration of the covenants  
hereinafter expressed, the parties hereto agree as follows:



## 1.

LICENSOR hereby grants to LICENSEE a non-exclusive license to manufacture devices (namely pieces of material in which at least one lens surface is applied thereto and which is adapted to be made into a finished corneal contact lens,) and to use and sell such devices manufactured only in the United States, its territories or possessions, which license is under said United States Letters Patent No. 2,510,438, or in any reissues thereof, and under any other United States Letters Patent issued on or prior to January 1, 1961, on corneal lenses under which the LICENSOR or any other company owned or controlled by LICENSOR or their successors or assigns may hereafter have the right to grant licenses, or any reissues thereof and also under said application and any United States Letters Patent which may issue as a result thereof, including divisions, continuations or reissues thereof for the remainder of the term for which said Letters Patent have been or may be granted, subject to the faithful performance by LICENSEE of the following terms and conditions. Such license under any other said issued patent shall include a release for past infringement to the extent that the LICENSOR has the right to grant such release. No license, express or implied, is granted to LICENSEE under any other inventions, patent applications, or patents owned or controlled as of January 1, 1961 or thereafter by LICENSOR or its successors or assigns, or under which LICENSOR or its successors or assigns, has the right to grant licenses.

## 2.

(a) LICENSEE, solely for the purpose of accounting hereunder, agrees to pay to LICENSOR royalties upon all devices consisting of pieces of finished material in

which two lens surfaces are applied thereto and which are adapted to be or are made into a finished or unfinished corneal lens calculated in accordance with the following schedule on all such devices sold by LICENSEE:

\$1.00 on each pair of the first 150,000 pairs of devices or \$ .50 per device.

\$ .75 on each pair of the next 100,000 pairs of devices or \$. 375 per device.

\$ .50 on each pair of the next 100,000 pairs of devices or \$ .25 per device.

\$ .25 on each pair of all additional pairs of devices or \$ .125 per device.

LICENSEE shall not pay royalties to LICENSOR on finished or unfinished lenses (i.e. lenses upon which two lens surfaces are already formed) when purchased from LICENSOR or from a Licensee of LICENSOR and such lenses shall not be counted in the total number of devices sold by LICENSEE under the schedule hereinabove.

(b) It is understood that the LICENSEE herein shall not be obligated to pay to LICENSOR any royalty upon devices sold by LICENSEE whether manufactured by LICENSEE or purchased elsewhere including purchases from LICENSOR or its successors or assigns, wherein only one lens surface is applied thereto, except in such instances where such devices are sold to a person, firm or Corporation who is not a Licensee of LICENSOR, in which case royalty shall be due and payable in accordance with and included in the totals set forth in the provisions of paragraph 2(a) hereof. LICENSEE shall maintain records of the sale of such devices for inspection as provided for herein and shall notify any Vendee-Licensee of LICENSOR on each such sale made that LICENSEE

under this Agreement has not paid royalty hereunder and and that said Vendee-Licensee is obligated to pay to LICENSOR royalty on each device when sold by such Vendee-Licensee.

(c) It is further agreed that should any of the devices sold by LICENSEE and upon which LICENSEE had paid a royalty hereunder be rejected and returned by LICENSEE'S Customer for full credit, and not for re-working, the LICENSEE shall be entitled to a credit for the amount of royalties paid by LICENSEE to LICENSOR upon such devices so rejected and returned. Such credits shall be deducted by LICENSEE from the royalties which may become due LICENSOR no later than the month immediately following the rejection and return of such devices by LICENSEE'S Customer.

(d) It is understood and agreed that, with the exception of Canada, LICENSEE shall pay a royalty of \$ .25 per pair of devices made in the United States and sold to fill bona fide orders in and for use solely in foreign countries, but these lenses will not count in the total of LICENSEE'S sales to affect or change the royalty brackets created in paragraph 2(a) hereof.

(e) LICENSOR may terminate this agreement upon thirty (30) days written notice to LICENSEE in the event that LICENSEE has not sold at least twenty (20) devices under this agreement during the preceding six months.

### 3.

(a) On or before the 20th day of each calendar month, LICENSEE agrees to supply to LICENSOR a true-written statement setting forth the total number of devices sold during the preceding fiscal or calendar month, together with all necessary information pertaining to such

returns and rejections by LICENSEE'S customers, during the preceding accounting period and on which LICENSEE claims credit, and shall simultaneously pay to LICENSOR the sums of money due in accordance with Paragraph 2 hereof. Statements of payments shall be sent to LICENSOR at P. O. Box 746, Chicago, Illinois, unless change of address is directed by LICENSOR.

(b) Royalties shall be due on said devices when billed out, or if not billed out, when delivered, or when paid for, if paid for before delivery, but royalties paid on devices not accepted by the customer shall be credited on future royalty payments, hereunder as provided in paragraph 2(c).

(c) Furthermore, if it becomes necessary to bring suit against LICENSEE for the collection of royalties, all expenses, including attorney's fees, which are incurred by LICENSOR, not to exceed Five Thousand Dollars (\$5,000.00), shall be borne by LICENSEE.

#### 4.

LICENSEE agrees that it will keep true and accurate records of accounts, including copies of invoices and other records in sufficient detail to enable the royalties payable hereunder to be determined, and further agrees that it will permit such invoices and records to be examined by an independent auditor or accountant, authorized by LICENSOR at any reasonable time during business hours, but not more than twice each year to the extent necessary to verify the statements and payments here provided for, it being agreed that such auditor or accountant shall make his report to LICENSOR in such manner that names of customers of LICENSEE will not be disclosed to LICENSOR. If any such examination shows an error of over five percent (5%) in Licensee's favor in the royalties

paid or payable, then the most of said examination shall be borne by the LICENSEE and such royalty deficit together with payment of said cost of examination shall be made to LICENSOR within thirty (30) days of the report of the examination.

5.

LICENSEE, if it so desires, may state in its advertising, sales promotional literature, or on its containers, that it is a Licensee under Tuohy United States Patent No. 2,510,438, or under any other patents which may be licensed under this Agreement.

6.

The LICENSEE agrees to refrain from either directly or indirectly attacking the validity of said Letters Patent licensed under this agreement during the term of this agreement.

7.

Nothing herein contained refers to or constitutes any settlement for past infringement, if any, that may have been committed by LICENSEE. Settlement for past infringement shall be subject to a separate agreement to be negotiated between the parties.

8.

LICENSOR agrees that in the event it should subsequent to the date of execution hereof grant a license to another person, firm or corporation under said Patent No. 2,510,438, or under any other United States Patent or application licensed hereunder upon overall terms and conditions more favorable than those herein accorded, except for the manner of settlement for past infringement, LICENSOR shall promptly offer LICENSEE the benefit

of such more favorable terms and conditions, which upon acceptance shall be retroactive to the date that such more favorable terms and conditions were accepted by said other person, firm or corporation.

9.

In the event that suit for infringement of a United States Patent or Patents is brought by a stranger or strangers to this Agreement wherein the validity of the Tuohy Patent No. 2,510,438, is directly placed in issue, to that extent only LICENSOR will defend LICENSEE by attorneys of LICENSOR'S choice and will pay any and all fees and cost involved in such defense. LICENSEE shall have the right to be represented in such suit as concerns such issue and other issues by Counsel of its own choice at its own expense.

10.

LICENSEE agrees that in the event of bankruptcy, or the appointment of a receiver or trustee for conserving or distributing its assets for the benefit of creditors, then this Agreement shall cease and terminate without notice as of one day prior to such event, and any and all rights of every kind and nature whatsoever which have been herein granted by LICENSOR to LICENSEE shall automatically terminate and revert to LICENSOR.

11.

LICENSOR agrees that upon written notice by LICENSEE of a manufacturer infringing said Tuohy patent 2,510,438, LICENSOR will attempt to either license or abate said infringement and if within six months after such notice the infringer has not been licensed or ceased infringing and LICENSEE so requests, LICENSOR agrees to bring suit against said manufacturer within

nine (9) months of such notice. However, LICENSOR will not be required to have more than one infringement suit under said Tuohy patent pending at any one time.

## 12.

(a) In the event either party shall be in default of any of the covenants and/or conditions under this license, then the other party shall have the right to cancel this Agreement, if it so desires, upon the expiration of a sixty (60) day written notice sent by registered mail, return receipt requested, to the defaulting party at its then known address; it being provided, however, that should the default be corrected within such sixty (60) day notice period, then this Agreement shall remain in full force and effect, the same as if no notice had been given.

(b) Termination of this Agreement as provided for herein shall not relieve LICENSEE of its obligation to pay all royalties which may have accrued prior to the date of such termination.

## 13.

If, in any suit for infringement of Patent No. 2,510,438, its claims shall be held to be invalid by the final judgment of a court of competent jurisdiction from which no appeal or other proceeding for review thereof can be or is taken, the obligation to pay royalties shall cease; provided, that such final judgment shall cease to have the effect set forth above in this paragraph from and after the date of a subsequent final judgment of a court equal or superior jurisdiction from which no appeal or other proceeding for review thereof can be or is taken, to the extent that such subsequent judgment shall hold a claim or claims valid, and in that event royalties due hereunder shall be retroactive to the date of cessation of payments hereunder and shall be paid within sixty (60) days thereafter.



## 14.

This Agreement may be terminated by LICENSEE by sixty (60) days prior written notice to LICENSOR at the expiration of Tuohy patent No. 2,510,438, or it may, at the option of the LICENSEE, remain in full force and effect under any one or more remaining patent or patents then coming under the Agreement at one-half ( $\frac{1}{2}$ ) the royalty as set forth under the provisions of Paragraph 2 hereof; if LICENSEE elects to be licensed under said remaining patent or patents, LICENSEE may terminate the agreement with respect thereto at any time subsequent to one year after expiration of Tuohy patent No. 2,510,438, upon sixty (60) days written notice to LICENSOR.

## 15.

THIS AGREEMENT shall be binding upon and inure to the benefit of the successors and assigns of the parties thereto, but shall not be assignable by LICENSEE except in connection with the transfer of the entire business and good will of LICENSEE as it is related to the manufacturer and/or sale of corneal lenses. If this Agreement is so assigned by LICENSEE, written notice will within thirty (30) days be given LICENSOR of the name and address of such assignee.

This Agreement shall be effective as of the 1st day of ....., 19.....

THE PLASTIC CONTACT LENS CO.

By .....

Title

.....  
NAME OF LICENSEE

By .....

Officer



PLAINTIFF'S EXHIBIT No. 53

(Letterhead of)

PANTER, NELSON, ROTHSTEIN & ALBERT

October 25, 1962

TO: THE LICENSEES OF

THE PLASTIC CONTACT LENS COMPANY

Gentlemen:

To fulfill our obligations under our licensing agreements, this letter is being sent to advise you of the circumstances under which The Plastic Contact Lens Company recently settled its patent litigation with George H. Butterfield, Sr. and his company, George H. Butterfield & Sons.

In that litigation Solex Laboratories, Inc. and The Plastic Contact Lens Company, as its successor, were charged with infringing Butterfield U. S. patent No. 2,544,246. Our patent counsel, Bair, Freeman & Molinare, who conducted the litigation and made the settlement, advised us that such litigation necessarily required the expenditure of substantial costs of litigation and exposed us to the risks involved in litigation.

To avoid this situation, a settlement agreement with the Butterfield interests was entered into, under which The Plastic Contact Lens Company was fully released from all claims alleging infringement of the Butterfield patent. As consideration for such release, The Plastic Contact Lens Company invested in George H. Butterfield & Sons the power to grant a non-exclusive, non-transferable, royalty-free license under Tuohy patent No. 2,510,438 to George H. Butterfield & Sons and to the four other companies which at that time were licensed under the Butterfield patent, namely, Titmus Optical Company, Rogers

Brothers, Southern Contact Lens Laboratories, Inc., and Utah Optical Supply Company.

These four last-named companies were included in the arrangement because of the Butterfield interests had indemnified them against liability arising from their infringement of the Tuohy patent. Their licenses under the Tuohy patent are conditioned upon their continuing to pay royalties under the Butterfield patent, and their license does *not* include the rights under our patent application Serial No. 701,153.

By thus settling the litigation with Butterfield, The Plastic Contact Lens Company not only relieved itself of possible material liability for past infringement, but also of substantial litigation expense which would have been incurred notwithstanding a decision in our favor.

Under the circumstances, it is clear that our settlement with the Butterfield interests did not constitute the granting of a license under Tuohy patent No. 2,510,438 "upon terms and conditions more favorable" than those provided in our standard license under that patent.

However, to fulfill all technical requirements of the license agreement, we are, by this letter, notifying all licensees that The Plastic Contact Lens Company stands ready to extend a revised license under the Tuohy patent No. 2,510,438 to any licensee which (a) deems our settlement with Butterfield to be "more favorable" than the terms of our standard license, and (b) is in a position to grant to The Plastic Contact Lens Company consideration equivalent to that which we received from the Butterfield interests.

To qualify for this offer, a licensee must show consideration equivalent to those involved in that case of which the paramount ones are: (a) that it owns a U. S. patent

that has been infringed by The Plastic Contact Lens Company, and (b) that such infringement has been of such magnitude as to yield a contingent liability comparable to that released by Butterfield.

To the best of our knowledge, none of our licensees is in such a position; indeed, so far as we know, none of our licensees holds *any* U. S. patent applicable in any manner to our products.

Should any of our licensees consider itself qualified to invoke paragraph 8 of our standard license agreement by virtue of our settlement with Butterfield, we should promptly be so advised in writing.

Very truly yours,

/s/ Irwin Panter

IRWIN PANTER

General Counsel for

The Plastic Contact Lens Company

IP:vm

PLAINTIFF'S EXHIBIT No. 54

(Letterhead of)

PANTER, NELSON, ROTHSTEIN & ALBERT

December 10, 1962

TO: THE LICENSEES OF

THE PLASTIC CONTACT LENS COMPANY

Gentlemen:

Under date of October 25, 1962, the undersigned wrote to the licensee of The Plastic Contact Lens Company advising them of the circumstances under which The Plastic Contact Lens Company recently settled its patent litigation with George H. Butterfield, Sr. and his company, George H. Butterfield & Sons.

Concern was expressed by a few of our licensees after this notification that they might be exposed to liability under the Butterfield Patent.

After due consideration of the problem with our patent attorneys, it was decided that an indemnity agreement could properly be offered to our licensees to secure them against any such claim.

Consequently, we have enclosed herewith such agreement, which we are tendering to each of our licensees. If, after examination of this agreement by you and your counsel, you desire to avail yourself of its benefits, please execute and return it in duplicate to Mr. Robert McClure, at The Plastic Contact Lens Company. He will secure the execution of one copy and its return to you for your files.

Very truly yours,  
/s/ Irwin Panter  
Irwin Panter  
General Counsel for The  
Plastic Contact Lens Company

IP:vm

Enc.

### PCL INDEMNITY AGREEMENT

This AGREEMENT made this ..... day of ....., 196...., between THE PLASTIC CONTACT LENS COMPANY, hereinafter called "Licensor", and ..... hereinafter called "Licensee";

### WITNESSETH :

WHEREAS the parties hereto have entered into a written agreements effective as of January 1, 1961, wherein Licensor granted to Licensee a non-exclusive license

for the use of U. S. Patent No. 2,510,438, under terms and conditions therein set forth, said written agreement being hereinafter called "said patent license";

AND WHEREAS, the parties hereto now desire to amend and supplement said patent license by undertaking further and additional mutual covenants and obligations, as hereinafter set forth;

NOW, THEREFORE, for and in consideration of the mutual promises herein contained, the parties hereto agree as follows:

1. Licensee agrees faithfully to report and pay royalties to Licensor in accordance with the provisions of Paragraphs 2, 3, and 4 of said patent license, for the full term of said patent license, upon all devices, as defined in said patent license, that are sold by Licensee during said term.

2. In consideration of the faithful performance by Licensee of its obligations hereunder, Licensor shall indemnify Licensee, to the extent herein provided, against any and all claims for infringement under Butterfield U.S. Patent No. 2,544,246 with respect to devices sold by Licensee during the period beginning on the date hereof and ending at such time as this Agreement shall be terminated. This indemnity undertaking shall be upon these terms and conditions:

- (a) In the event any suit, action or claim is asserted against Licensee for infringement of said Butterfield Patent, Licensor shall pay all attorneys' fees and court costs that shall be incurred in the defense of Licensee on such claim, suit, or action, and Licensor shall further pay Eighty-Five Percent (85%) of the amount of any award of damages that may be finally adjudged against Licensee on such

claim, suit, or action, insofar as such award shall be based on devices sold by Licensee during the term hereof and on which Licensee shall have paid royalties to Licensor as provided in Paragraph 1 hereof.

(b) Licensor's indemnity obligations hereunder shall extend only to claims, suits, or actions for infringement. They shall not apply to any contractual claims or disputes between Licensee and Butterfield.

(c) Licensor shall have the right to designate the attorneys to defend, in Licensee's name and behalf, any suit, claim, or action that may be indemnified by Licensor hereunder, and shall have the sole right to settle or otherwise compromise such suit or action.

(d) As soon as Licensee shall be served with a summons or any other notice that it is charged with infringement of said Butterfield patent, Licensee shall immediately give Licensor written notice thereof. If a suit or action shall have been brought against Licensor, it shall promptly forward the summons and pleadings therein to Licensor or to the attorneys designated by Licensor to defend such suit or action.

(e) Licensee shall, at all times during the pendency of any claim, action, demand, or suit indemnified hereunder, cooperate with Licensor and the attorneys designated by Licensor, attend hearings and trials, assist in providing, securing, and giving evidence and otherwise assist Licensor in such ways as are reasonably appropriate to facilitate an effective defense.

(f) Licensee shall pay promptly and in full on or before the due date thereof, all royalties owing to Licensor.

3. This Agreement may be terminated by notice, in writing, by either party hereto to the other, which termination shall be as of a date not less than Sixty (60) days after the mailing of such notice. Termination of this Agreement shall not operate or be construed as termination of said patent license. Termination hereof shall not affect any right of either party that shall have accrued prior to such termination.

4. All notices hereunder shall be delivered in person or by registered mail, and until otherwise designated, shall be addressed to Licensor, at 18 South Michigan Avenue, Chicago, Illinois, and to Licensee at .....

5. This Agreement shall be interpreted in accordance with the laws of the State of Illinois and shall not be binding until accepted by Licensor at its home office in Chicago, Illinois.

..... (SEAL)  
Licensee

By .....

ACCEPTED:

THE PLASTIC CONTACT LENS COMPANY (SEAL)

By .....

## PLAINTIFF'S EXHIBIT No. 73

## List of Licenses Issued by George H. Butterfield Sr.

<u>Name of Licensee</u>	<u>Date of Issue</u>
Contalens Laboratories, Ltd.	8/15/63
Professional Eye Products	7/1/63
United Optical Co.	June 1963
Northwest Northern Optical Co.	June 1963
Kuhns Optical Lab.	5/15/63
James Dippery & Jack Case	4/25/63
Universal Contact Lens Co. Inc.	4/1/63
William R. Simpson	April 1963
Global Contact Lens, Inc.	April 1963
Universal Contact Lens of Dallas Inc.	1-1963
Vernon V. Caton O.D.	December 1962
Columbia Bifocal Co.	November 1962
Vision Clear Inc.	November 1962
Glenn Batteiger Jr.	10/29/62
Rich Tint Corp.	10/19/62
Professional Contact Lens Co. Inc., Calif.	October 1962
Professional Contact Lens Co. Inc., Illinois	August 1962
Midwest Sientific Co., Inc.	July 1, 1962
Urocon Inc.	5/25/62
Keith W. Ackman	5/25/62
Paracon Inc.	5/18/62
Professional C/L Lab. Inc.	5/15/62
Utah Optical Supply Co.	5/1/61
Geo. V. Stephens	4/10/61
Frontier Contact Lens Inc.	11/21/60
James C. Tannehill	10/1/60
Sloan Optical Co.	7/19/60
Roger Bros.	6/4/60



Jon Optical Corp.	6/1/60
Mann Instrument Co.	6/1/60
Plastic Contact Lens	May 1960
Crown Contact Lens Corp.	5/1/60
Titmus License	12/8/1959

\* \* \*

PLAINTIFF'S EXHIBIT No. 74

List of Licenses who have stopped paying—  
Last payment

Tanco-Tannehill—Honolulu	June 15 1961
Richard Hunt— San Francisco	Never paid
Kerarex—San Francisco	1960
Dr. George Stephens— Atlanta, Ga.	Sept. 24 1963
Vernon Caton— Denver, Colo.	Never paid
Keith Ackman— Los Angeles	Jan. 16 1964
Viscon Clear Inc.— Salt Lake City	July 7 1963 Filed suit paid 500.00
Uracon Inc.—Los Angeles	March 23 1964
Con-Cise Contact Lens Co.—Oakland, Calif	Only paid \$100.00 on account
Global Contact Lens Inc— Miami, Florida	Never paid
Jon Optical Corp.— Hayward, Calif	Oct. 13 1963
Procon—Pearia, Ill.	Nov. 15 1963

## PLAINTIFF'S EXHIBIT No. 84F (Excerpt)

*(Excerpt From Pl. Ex. 84F: Butterfield's License Agreement With Dippery and Case)*

AGREEMENT SELLING ALL RIGHTS TO  
U. S. PATENT NO. 2,544,246

## WITHIN A DESIGNATED GEOGRAPHICAL AREA

THIS AGREEMENT is entered into by and between GEORGE H. BUTTERFIELD, SR., of Portland, Multnomah County, Oregon, hereinafter sometimes referred to as "LICENSOR" and JAMES C. DIPPERY and JACK R. CASE of Houston, Harris County, Texas, hereinafter sometimes referred to as "LICENSEE";

WHEREAS LICENSOR is the inventor and sole owner of all right, title, and interest in and to United States Letters Patent No. 2,544,246 and Canadian Letters Patent No. 487,880 for "Corneal Contact Lens"; and

WHEREAS LICENSEE desires to acquire the exclusive right and license to make, use, and sell and to grant sublicenses to make, use, and sell devices under said patents above identified within a specific geographical area in the United States;

NOW, THEREFORE, for and in consideration of the mutual covenants hereinafter recited and for other good and valuable consideration, the receipt of which is hereby acknowledged, the parties hereto agree as follows:

## I.

LICENSOR hereby grants unto LICENSEE the sole and exclusive right and license to make, use, and sell and to grant sublicenses to make, use, and sell devices under said Letters Patent above identified in the states of Texas, Oklahoma, Tennessee, Missouri, Iowa, Louisiana, Missis-

issippi, Alabama, New Mexico, and Georgia; provided, however, this agreement shall not operate to enlarge, to terminate, or to interfere with any licenses heretofore given by LICENSOR within said area and further provided that LICENSOR shall have no authority or control over the granting of sublicenses within the area covered by this agreement except subject to the terms and conditions hereinafter set out.

## II.

If LICENSEE establishes any branch offices or companies other than those presently licensed by LICENSOR to Universal Contact Lens Co., Inc., in the cities of Houston, Texas, and San Antonio, Texas, and Shreveport, Louisiana, then LICENSEE agrees and binds itself to pay to LICENSOR, as royalty, an amount which is equivalent to not less than the royalties paid by an equivalent sublicensee under this agreement.

## IIA.

LICENSOR agrees to pay to LICENSEE thirty-three and one-third per cent ( $33\frac{1}{3}\%$ ) of all monies received by it from sublicense agreements and releases for past infringement granted by LICENSEE within the area covered by this agreement, and thirty-three and one-third per cent ( $33\frac{1}{3}\%$ ) of monies paid to LICENSOR by LICENSEE by reason of its manufacture, use, or sale hereunder. LICENSOR agrees to make all payments due LICENSEE hereunder to:

Jack W. Hayden  
c/o Hayden & Pravel  
Suite 1111  
500 Jefferson Building  
Cullen Center  
Houston 2, Texas

## III.

LICENSOR further agrees that on or before the fifteenth (15th) day of each calendar month it will furnish to LICENSEE an itemized statement which shall accurately show: (1) all royalties and payments which have been received by LICENSOR under any sublicenses granted by LICENSEE hereunder; (2) all royalties which have accrued to LICENSOR by reason of sale of devices by LICENSEE; and (3) payment of all monies due LICENSEE based on the above computations.

## IIIA.

LICENSEE agrees that it will only grant sublicenses which conform to Exhibit A (unitary license form) or Exhibit B (paid up license form) attached hereto and will only grant releases for past infringement in the form of Exhibit C, attached hereto. LICENSEE agrees that if the paid up license (Exhibit B) is granted any sublicense, it will compute the amount of royalty as follows:

Add the total sales of proposed licensee, reasonably verified from business records exhibited, of manufactured contact lenses, in the year immediately preceding the intended commencement date of the license agreement. Divide this total of single lenses by 12 to arrive at an average monthly figure of sales of single lenses. This figure as to average monthly sales of single lenses shall then be multiplied by 50 cents per lens. The result so obtained is the monthly payments measured by the then unexpired portion of the life of the Canadian patent, disregarding fractions of less than one-half month. The Canadian patent expires November 11, 1969. In the case of manufacturers doing business more than six (6) months and less than twelve (12) months, the total production

record shall be used and the result divided by the nearest total number of months in business, which result, multiplied by 50 cents per single lens, shall become the monthly rate.

#### IV.

LICENSEE agrees to keep proper books of account relating to any manufacture and sale of devices by LICENSEE hereunder, and LICENSOR agrees to keep proper books of account relating to monies received by LICENSOR from any sublicenses granted hereunder, and LICENSEE agrees to furnish to LICENSOR an executed copy of each and every sublicense granted by LICENSEE hereunder, and said books shall be open at all reasonable times during business hours for inspection by LICENSOR and LICENSEE and/or their duly authorized representative. LICENSOR and LICENSEE shall have the right, at their expense, to audit the books of account of the other from time to time and at various times.

#### V.

If the monies paid LICENSOR from this license from sublicenses and from releases for past infringement hereunder as his  $66\frac{2}{3}\%$  share do not equal or exceed eighteen thousand dollars (\$18,000.00) during each and every contract year of the term of this agreement, then LICENSOR may terminate this agreement in the manner as set forth in paragraph VIII hereof; provided, however, that termination of this agreement shall not terminate any sublicenses granted hereunder prior to the date of termination, nor shall it terminate the right of LICENSEE to thereafter to continue to receive thirty-three and one-third per cent ( $33\frac{1}{3}\%$ ) of all monies paid to LICENSOR from sub-

licenses entered into prior to the date of termination of this exclusive license agreement, and LICENSOR agrees to continue to pay to LICENSEE said thirty-three and one-third per cent ( $33\frac{1}{3}\%$ ).

## VI.

LICENSOR agrees to notify any party within the geographical area of this agreement as to its infringement of U. S. Patent No. 2,544,246 within thirty (30) days after its receipt from LICENSEE of the name and address of the party believed to be infringing. In the event that LICENSEE has been unable to negotiate a satisfactory sublicense with any party so notified within a period of three (3) months after said written notice of infringement, LICENSOR agrees to institute suit for infringement of said U. S. Patent No. 2,544,246 against such infringer; provided, however, that if LICENSOR brings one suit for infringement of said U. S. Patent No. 2,544,246 against one infringer within the area of this agreement, further suits will not be required within the area of this license agreement until the final disposition of the first suit to the end that LICENSOR will not be required to prosecute more than one suit at a time. LICENSEE agrees to supply to LICENSOR a sample of any lens it believes to infringe along with prescription for lens and an invoice evidencing purchase of the lens from the party believed to infringe, as a condition to any duty to notify concerning infringement or bring infringement action. If LICENSOR institutes suit for infringement against any person, firm, or company within the area of this agreement after a request by LICENSEE to institute suit, then LICENSOR shall receive one hundred per cent (100%) of the amount recovered as past infringement damages from any such suit; however, any license to anyone sued under this provision for future manufacture, use, or sale

shall be subject to the terms and conditions hereof, and LICENSEE shall receive and be paid by LICENSOR thirty-three and one-third per cent ( $33\frac{1}{3}\%$ ) of any such license as provided herein.

Subject to paragraph IIIA hereof, LICENSEE shall have sole and exclusive control and authority in negotiating and granting any sublicenses hereunder; provided that LICENSEE agrees and obligates itself that it shall not intentionally urge or suggest to prospective sublicensees the nature of the obligations, if any, which such prospective licensees may owe to others holding patents in the field of corneal contact lens.

## VII.

The parties hereto specifically agree that this license agreement does not create any confidential or fiduciary relationship nor does it create nor is it intended to create a partnership between the parties. LICENSEE shall be responsible solely for its acts and expenses in negotiating and obtaining sublicenses hereunder and in its operations hereunder.

## VIII.

If during the term of this agreement LICENSEE should (1) fail to pay to LICENSOR all royalties and monies in the manner as specified herein; nor (2) violate or fail to perform any other of its obligations under this agreement for a period of thirty (30) days after written notice of such violation or failure; or (3) be adjudicated a bankrupt or file a petition for an arrangement in bankruptcy or make an arrangement for the benefit of creditors or become insolvent or permit a receiver to be appointed of its business or assets, then and in any of such events, LICENSOR shall have the right and option to cancel this

agreement. Any termination of this agreement shall not affect the liability of LICENSEE to pay to LICENSOR all monies theretofore accrued and shall not affect the liability of LICENSOR to thereafter to continue to pay to LICENSEE thirty-three and one-third per cent ( $33\frac{1}{3}\%$ ) of all monies received by LICENSOR from this license and sub-licenses hereunder entered into prior to the termination of LICENSEE's exclusive license.

### IX.

The failure of either party hereto to require performance of any provision hereof shall in no manner effect the right of either party to thereafter enforce the same. The waiver of either party of any breach of any provision hereof shall never be construed to be a waiver of any succeeding breach of any provision or of a waiver of the provision itself.

### X.

This agreement shall remain in full force and effect until the expiration of Canadian Patent No. 487,880 or the expiration of U. S. Patent No. 2,544,246, whichever occurs later unless this agreement is terminated prior thereto under the provisions of paragraph VIII, and in such event, the payment of thirty-three and one-third per cent ( $33\frac{1}{3}\%$ ) as provided in paragraph VIII shall continue until the last expiring of either the Canadian Patent No. 487,880 or U. S. Patent No. 2,544,246.

### XI.

LICENSEE may not assign this agreement without the prior written consent of the parties hereto. This agreement shall be construed under the laws of the state of Texas.



## XII.

In the event that LICENSOR should sell or transfer all or any part of his interest either in his United States patent or in his Canadian patent, LICENSEE shall have no claims whatsoever upon any compensation or consideration received by LICENSOR for such transfer or sale; provided, however, that such transfer or sale shall be subject to the terms and conditions of this license.

## XIII.

This agreement is binding upon the heirs, administrators, devisees, legal representatives, and executors of the parties hereto.

## XIV.

LICENSEE and LICENSOR agree that if a sublicense is entered into where a sublicensee has a branch or an office within another state not included in this license, then LICENSEE shall have the right to negotiate a sublicense for said other branch or office outside the geographical area of this agreement. LICENSOR agrees that it will, prior to granting any exclusive licenses to a third party in any of the other states of the United States east of the Mississippi, offer to LICENSEE in writing the opportunity to obtain an exclusive license in such state upon the same terms and conditions as this exclusive agreement in order that they may have the prior right of first refusal.

## XV.

No other agreement, written or verbal, exists between the parties to this agreement respecting the subject matter hereof, and none of the terms or conditions of this agreement shall be held to have been waived, altered, or

augmented except only by instrument in writing duly executed by both parties and attached hereto.

XVI.

The addresses of the parties hereto for all payments and written notices shall be:

LICENSOR:

George H. Butterfield, Sr.  
810 S. W. Ninth Avenue  
Portland 5, Oregon

LICENSEE:

James C. Dippery and  
Jack R. Case  
c/o Jack W. Hayden  
Suite 1111, 500 Jefferson Building  
Cullen Center  
Houston 2, Texas

The above addresses may be changed by notice in writing from George H. Butterfield, Sr., and Jack W. Hayden or B. R. Pravel, respectively.

WITNESS our hands in multiple originals this 25th day of April, 1963.

.....  
GEORGE H. BUTTERFIELD, SR.

/s/ James C. Dippery  
JAMES C. DIPPERY

/s/ Jack R. Case  
JACK R. CASE

## EXHIBIT A

## LICENSE AGREEMENT

JAMES C. DIPPERY and JACK R. CASE warrant and represent that they have the right and authority to grant to the undersigned sublicensee hereinafter called "LICENSEE" a nonexclusive, nontransferable, nonassignable, and personal sublicense to make, use, and sell corneal contact lenses under United States Patent No. 2,544,246 and Canadian Patent No. 487,880 and each of them, subject to the following terms and conditions, said JAMES C. DIPPERY and JACK R. CASE sometimes hereinafter referred to as "LICENSOR".

1. Subject to the terms and conditions hereinafter set forth, LICENSOR hereby grants unto LICENSEE a non-exclusive, sublicense to make, use, and sell finished corneal contact lenses under said patents above identified and to make, use, and sell unfinished lenses to be subsequently finished under said patents above identified.

2. For other good and valuable consideration, the receipt of which is hereby acknowledged and in consideration for the rights granted herein, the undersigned LICENSEE hereby agrees to pay to the order of GEORGE H. BUTTERFIELD, SR., at 810 S. W. Ninth Avenue, Portland 5, Oregon, a royalty of Fifty Cents (50¢) for each lens sold hereunder and finished to embody any of the licensed subject matter or to be subsequently finished to embody any of the licensed subject matter. In this connection, LICENSEE agrees to render to LICENSOR at Suite 1111, 500 Jefferson Building, Houston 2, Texas and to GEORGE H. BUTTERFIELD, SR., at his above address on or before the fifteen (15th) day of each calendar month hereafter a written statement showing all corneal contact lenses sold hereunder during the last preced-

ing calendar month and to remit with each said statement to GEORGE H. BUTTERFIELD, SR., all royalties due and payable thereon at the hereinabove specified royalty rate. If LICENSEE shall default in making any royalty payment hereunder when due and if LICENSOR shall institute suit and obtain judgment therefor, LICENSEE agrees to pay to LICENSOR an additional sum in the amount of ten per cent (10%) of the total sum due as attorneys' fees.

LICENSEE further agrees to maintain complete and accurate records of all corneal contact lenses sold and to allow LICENSOR or his duly authorized representative from time to time and at various times to examine and copy said records at reasonable business hours for the purpose of checking the accuracy of any royalty statement. Said records shall show sufficient information to determine from an inspection thereof whether or not a corneal contact lens sold embodies any of the licensed subject matter and if any of said records shall fail to show such information as to any particular lens or lenses, then and in that event, said lens or lenses shall be deemed to embody the licensed subject matter.

3. If LICENSEE shall default in performing any obligation hereunder and shall fail to cure the default within thirty (30) days after LICENSOR shall have mailed to LICENSEE a written notice specifying the claimed default; or if LICENSEE shall be adjudged bankrupt or shall make an assignment for the benefit of creditors or if LICENSEE's business shall be placed in the hands of a receiver, LICENSOR shall have the right to terminate this license and agreement by mailing to LICENSEE written notice of his election so to do or LICENSOR may specifically enforce the provisions hereof.

4. LICENSEE shall not have the right to grant sub-license rights hereunder and shall not have the right to assign or transfer this license and agreement unless and until LICENSOR's written consent shall be first obtained.

5. Unless sooner terminated as hereinabove specifically provided, this license and agreement shall endure and bind and benefit the parties hereto, their heirs, successors, and assigns throughout the term of the last expiring of said United States and Canadian patents.

IN WITNESS WHEREOF, the parties have signed this agreement as of the ..... day of ....., 19.....

.....  
JAMES C. DIPPERY

.....  
JACK R. CASE

LICENSOR

.....  
a corporation of .....  
having its principal place of business  
at .....  
By .....  
..... Title

LICENSEE

Attest:

.....  
Secretary

EXHIBIT B

PAID UP AGREEMENT

JAMES C. DIPPERY and JACK R. CASE warrant and represent that they have the right and authority to grant to the undersigned sublicensee hereinafter called "LICENSEE" a nonexclusive, nontransferable, nonassignable, and personal sublicense to make, use, and sell corneal contact lens under George H. Butterfield, Sr.'s United States Patent No. 2,544,246 and Canadian Patent No. 487,880 and each of them, subject to the following terms and conditions, said JACK R. CASE and JAMES C. DIPPERY sometimes hereinafter referred to as "LICENSOR".

1. Subject to the terms and conditions hereinafter set forth, LICENSOR hereby grants unto LICENSEE a non-exclusive, sublicense to make, use, and sell finished corneal contact lenses under said patents above identified and to make, use, and sell unfinished lenses to be subsequently finished under said patents above identified.

2. For other good and valuable consideration the receipt of which is hereby acknowledged and in consideration for the rights granted herein, the undersigned LICENSEE hereby agrees to pay to the order of GEORGE H. BUTTERFIELD, SR., at 810 S. W. Ninth Avenue, Portland 5, Oregon, the total sum of \$..... payable as follows: LICENSEE agrees to pay \$ ..... upon execution hereof and to pay the balance in equal monthly installments of \$..... each as evidenced by that certain promissory note of even date herewith executed by LICENSEE as payor, payable to the order of George H. Butterfield, Sr., in the principal sum of \$..... and containing the usual default and attorneys' fees clauses. Upon the payment of the last of said install-

ments, this license shall become fully paid up until said respective patents shall expire and LICENSEE shall then become released and discharged from any claim of infringement of said patents and each of them subsequent to the date of this agreement. If LICENSEE shall default in the payment of any of said installments when due hereunder, then LICENSOR, at his option, may declare this license agreement terminated and payments made theretofore by LICENSEE to LICENSOR shall be allocated as royalties over a period coterminous with this agreement.

#### IT IS FURTHER MUTUALLY AGREED THAT

(a) The sum hereinabove provided to be paid by LICENSEE as consideration for this license has been calculated on the number of corneal contact lenses sold in LICENSEE's regular business during the past calendar year as represented by LICENSEE and is an estimate of the corneal contact lenses normally to be made and sold in LICENSEE's business to those who would ordinarily constitute his customers in the trade, subject only to normal growth thereof, during the remainder of the life of the licensed patents and, therefore, unless and until LICENSOR's written consent be first obtained, this license shall not inure or apply to any other corneal lens manufacturing business or concern which may acquire ownership or control of LICENSEE or of which LICENSEE may acquire ownership or control, or of which LICENSEE may become a division or part, or with which LICENSEE may become merged, consolidated, commingled or affiliated; provided, however, that, subject to the terms and conditions hereof, this license may be assigned to any bona fide successor to LICENSEE's entire business and good will,

so long as said successor shall continue operation of LICENSEE's business separate and apart from any other corneal lens manufacturing business and subject to all the terms and conditions hereof; and

(b) That if LICENSEE shall be adjudged bankrupt or shall make an assignment for the benefit of creditors, this license may become terminated as of the occurrence of such event at the option of LICENSOR but such occurrence shall not relieve LICENSEE of payment to LICENSOR of all monies hereunder.

IN WITNESS WHEREOF, the parties have signed this agreement as of the ..... day of ....., 19.....

.....  
JAMES C. DIPPERY

.....  
JACK R. CASE  
LICENSOR

.....  
a corporation of .....  
having its principal place of business  
at .....  
By .....  
..... Title

Attest:

.....  
Secretary



EXHIBIT C

RELEASE

In consideration of the sum of \$..... and other good and valuable considerations paid by ..... to GEORGE H. BUTTERFIELD, SR., JAMES C. DIPPERY, and JACK R. CASE and each of them, their successors and assigns, do hereby release and forever discharge said ..... and/or its customers from all claims for past infringement with respect to corneal contact lenses made, used, or sold prior to the license agreement with JAMES C. DIPPERY and JACK R. CASE executed simultaneously herewith.

.....  
JAMES C. DIPPERY

.....  
JACK R. CASE

STATE OF TEXAS        }  
COUNTY OF HARRIS    }

BEFORE ME, the undersigned authority, on this day personally appeared JAMES C. DIPPERY and JACK R. CASE, both known to me to be the persons whose names are subscribed to the foregoing instrument and acknowledged to me that they executed the same for the purposes and consideration therein expressed.

GIVEN under my hand and seal of office this ..... day of ....., 19.....

.....  
Notary Public in and for  
Harris County, Texas

## PLAINTIFF'S EXHIBIT 110.

OOMS, McDOUGALL &amp; HERSH

Attorneys at Law  
135 South La Salle Street  
Chicago 3, Illinois

October 24, 1962

Irwin Panter, Esq.  
Panter, Nelson, Rothstein & Albert  
10 South LaSalle Street  
Chicago 3, Illinois

Dear Mr. Panter:

You have consulted us for an independent opinion as to what The Plastic Contact Lens Co. should do by way of notifying its licensees of the terms on which the Butterfield litigation was recently settled.

In particular, your inquiry related to Paragraph 8 of Plastic's standard license agreement and how licensees' rights under that paragraph might be affected by the Butterfield settlement. You had in mind, of course, that Plastic, in consideration of Butterfield's release of Plastic's infringement liability, granted a paid-up license under the Tuohy patent to the Butterfield company and four Butterfield licensees that had been indemnified by Butterfield against liability for infringement of Tuohy.

In giving you my opinion on this question, it will be well at the outset to consider the terms of Paragraph 8; the text varies slightly from one license agreement to another, but in substance it reads like this:

LICENSOR agrees that in the event it should subsequent to the date of execution hereof grant a license to another person, firm or corporation under said Patent No. 2,510,438, or under any other United States Patent or application licensed hereunder upon terms and conditions more favorable than those here-

in accorded, except for the manner of settlement for past infringement, LICENSOR shall promptly *offer* LICENSEE the benefit of such more favorable terms and conditions, which *upon acceptance* shall be retroactive to the date that such more favorable terms and conditions were accepted by said other person, firm or corporation.

From the language of Paragraph 8 and the terms of the Butterfield settlement, three things are clear:

(1) If the license which formed a part of the Butterfield settlement was in fact granted on “terms and conditions more favorable” than those provided in Plastic’s standard license agreement, then Plastic is obliged to “offer” its licensees “the benefit of such more favorable terms and conditions”.

(2) The right of an eligible licensee to have its license thus revised is not automatic or self-executing; it comes into being only “upon acceptance” by such eligible licensee.

(3) None of Plastic’s licensees could possibly “accept” a license on the terms provided in the Butterfield settlement unless such licensee were in a position to offer Plastic the same or equivalent consideration as that which flowed to Plastic from Butterfield.

Since none of Plastic’s licensees, so far as you are aware, has any claim for patent infringement against Plastic, it is most unlikely that any such licensee will be in a position to “accept” a revised license. Nonetheless, I believe it essential that Plastic notify all its licensees of the Butterfield settlement and “offer” to them the privilege of qualifying for a revised license if they can do so. I tender that advice because, under the law, a licensor which

fails thus to “offer” does so at the peril of having its omission held to be a breach of contract, should a court later determine, as to some particular licensee, that the terms of the new license would in fact have been more favorable. (*Prestole Corp. v. Tinnerman Products, Inc.* (6 Cir., 1959), 271 F.2d 146, 153-154).

When a licensor notifies its licensees of a new license, pursuant to a contract provision of the sort represented by Paragraph 8, any licensee as to which the new terms are “more favorable” must exercise its option to adopt the new terms within a reasonable time; otherwise it waives such right. (*Harley C. Loney Co. v. Mills* (7 Cir., 1953), 205 F.2d 219, 220).

As indicated above, I think it *very* unlikely that any of Plastic’s licensees will be in a position to claim revised license terms by virtue of the Butterfield settlement agreement. Settlement of litigation involves complex factors that are difficult or impossible to assess in dollars. A company’s action in granting license rights in consideration of settlement of litigation will not be deemed a grant on “terms . . . more favorable” unless so proved by persuasive evidence, the burden of proof in such event being on the licensee. (*Sbicca-Del Mac, Inc. v. Milius Shoe Co.* (8 Cir., 1944), 145 F.2d 389, 402-403).

Summing up, I recommend that a circular letter be sent to all of Plastic’s licensees, giving them notice that paid-up licenses under the Tuohy patent were granted to Butterfield and the four then-existing Butterfield licensees in consideration of Plastic’s being released from its contingent liability for infringement of the Butterfield patent. In the same letter, Plastic should state that it will give consideration to the claims of any of its licensees which consider themselves eligible for paid-up licenses on the same terms.

Should some licensee prove to have a bona fide claim against Plastic for patent infringement, of a magnitude comparable to that released by Butterfield, then such licensee would be entitled to release such claim in exchange for a paid-up license. Only a licensee so situated, however, would be in a position to do so.

With this letter I am returning to you the documentary materials which you submitted for my consideration. Should you desire further comment on any of the matters discussed herein, please telephone or write me.

Sincerely yours,

/s/ Dugald S. McDougall  
Dugald S. McDougall

DSMcD:WF  
Encl.

## PLAINTIFF'S EXHIBIT 113

PATENTED FILE

RETURN TO RECTOR ROOM

NUMBER (Series of 1943)

12040

DIV. 7

PATENT NO.

2510438

DATED

JUN 6 1950

(EX'R'S BOOK)

B-19-97

Name KEVIN M. TUOHY

Resident of Solex Laboratories, Inc., Los Angeles, Calif., a corp. of California

of LOS ANGELES,

State of CALIFORNIA

Invention CONTACT LENS

ORIGINAL

APPLICATION FILED COMPLETE

FEB 28

1948

 Petition, Specification,  
 Oath, First Fee \$50  
 1 sheets Drawings,

FEB 28

1948

PARTS OF APPLICATION FILED

Examined and passed for Issue May 1, 1950

Notice of Allowance MAY 1 1950

Final Fee \$30 May 8 1950

Attorney HAZARD A. MILLER, 706 CENTRAL BLDG., LOS ANGELES, CALIFORNIA

Associate Attorney

No. of Claims Allowed 2 Print Claims 1 In O. B. Class 38/54

Title as allowed CONTACT LENS.



1 This invention relates to a contact lens adapted to be  
2 applied to the human eye for the primary purpose of correcting de-  
3 ficient vision.

4 Heretofore contact lenses have been produced that have been  
5 made of either glass or synthetic resin plastics which have portions  
6 resting directly on the cornea of the eye with a supporting flange  
7 or border resting on the scleral portion of the eye or which have  
8 central portions arching over the cornea and which have flange or  
9 border portions designed to extend beyond the limbus of the eye. The  
10 optical correction has been <sup>been</sup> ground on that portion of the contact  
11 lens disposed over the cornea and fluids compatible with the eye  
12 tissue have generally been interposed between the lens and the eye.  
13 Such contact lenses have had a number of objections which have,  
14 either collectively or individually, retarded their general use.  
15 Among these objections are (1) the time and skill required to proper-  
16 ly fit the lenses to the eyes of the patient; (2) the lack of comfort  
17 which prevents such contact lenses from being worn continuously  
18 longer than only relatively short times; (3) the development of the  
19 appearance of rainbows or halos, particularly around bright light  
20 sources and the clouding of the vision after the lenses have been  
21 worn for a relatively short time; and (4) the necessity of determin-  
22 ing and then using fluids with the contact lenses which are compatible  
23 with the eye tissues of the user.

24 I have ascertained that one important source of these ob-  
25 jections is occasioned by the fact that the contact lenses heretofore  
26 devised universally engage the scleral portion of the eye so that  
27 the pressure of the flange or border portion of the contact lens on  
28 the scleral portion not only applies objectionable pressure to the  
29 nerves in the eye but retards the normal blood flow through the veins  
30 in the scleral portion. The pressure on the nerves and the retarding  
31 of the normal blood flow is conducive to the development of irrita-  
32 tion and is a principal reason for the appearance of the objection-

1 able rainbows, halos and cloudiness. The contact lenses heretofore  
2 developed, even when removed for the purpose of resting the eye, do  
3 not bring about immediate relief on removal and, due to the fact  
4 that they cover such wide expanses of the eye, they must be fitted  
5 with a relatively high degree of accuracy by one who is highly skill  
6 in this type of work. With the use of contact lenses which extend  
7 beyond the limbus portion the eye is almost completely covered and  
8 with the fluid sealing off all possibility of air and natural eye  
9 fluids the eye soon becomes exhausted.

10 An object of the present invention is to provide an im-  
11 proved contact lens which is characterized by the fact that when  
12 properly fitted to the eye of the person for which it was designed  
13 its maximum dimensions will be less than the dimensions across the  
14 limbus at the edges of the cornea. In the preferred arrangement,  
15 the contact lens embodying the present invention is smaller in size  
16 than the iris but larger than the maximum pupil opening. This is  
17 particularly true when the lens and the iris are considered along  
18 the horizontal meridian. When considered on the vertical meridian  
19 the lens may exceed the iris slightly but still should be within  
20 the limbus. In this manner as the lens normally does not engage  
21 the sclera, the sclera is exposed to air and natural eye fluids and  
22 is not subjected to the objections arising from pressures applied  
23 thereto.

24 A further important characteristic of the improved lens  
25 resides in the fact that although it is in the nature of a concavo-  
26 convex section of transparent material largely conforming in shape  
27 and size to the cornea of a given eye, the inside or concave surface  
28 actually is slightly flatter or may be regarded as having a slightly  
29 greater radius of curvature than the cornea. In this manner the  
30 lens may actually contact the cornea near the center of the lens  
31 while the portions of the lens adjacent its margin are slightly  
32 spaced therefrom. This space affords an opportunity for the natural



1 eye fluids to enter and relieves pressure on the cornea. Although  
2 blinking of the eyelids may displace the lens from over the cornea  
3 temporarily so that its edges may extend across the limbus and even  
4 onto the sclera, the minimum contact between the lens and the cornea  
5 occasioned by this relation of curvatures is such as to reduce the  
6 irritation, if any is present at, to a minimum.

7  
8  
9  
10  
11 With the foregoing and other objects in view, which will  
12 be made manifest in the following detailed description and specifi-  
13 cally pointed out in the appended claims, reference is had to the  
14 accompanying drawings for an illustrative embodiment of the inven-  
15 tion, wherein:

16 Figure 1 is a vertical section on an enlarged scale through  
17 the forward portion of a human eye illustrating a contact lens  
18 embodying the present invention in applied position thereon;

19 Figure 2 is a front view in elevation of the contact lens  
20 illustrated in Figure 1;

21 Figure 3 is a rear view in elevation of the same;

22 Figure 4 is a front view in elevation of a slightly modi-  
23 fied form of construction; and

24 Figure 5 is a vertical section taken substantially upon the  
25 line 5-5 upon Figure 4.

26  
27  
28  
29  
30 Referring to the accompanying drawings wherein similar  
31 reference characters designate similar parts throughout, in Fig. 1  
32 the lens of the eye is indicated at 10 over which there is the iris 11

1 which defines the pupil 12. The cornea is generally indicated at 13  
2 and the sclera generally indicated at 14. The limbus portion which  
3 defines the sclera from the cornea is indicated at 15.

4       The contact lens embodying the present invention consists  
5 of a concavo-convex section 16 of any suitable transparent or semi-  
6 transparent material. This material may be optical glass or, in  
7 conformity with conventional practice, it may be a synthetic resin  
8 plastic of the type now generally being employed in the manufacture  
9 of contact lenses. The material in the usual situation may be  
10 perfectly transparent but in some instances it may be slightly  
11 darkened or tinted either for glare-reducing purposes or to enhance  
12 or modify the natural color of the iris 11 in assuring desired  
13 cosmetic effects.

14       This section will, of course, vary in size and shape to  
15 conform to the particular eye to which it is fitted but in embodying  
16 the present invention it possesses the following characteristics.  
17 The maximum dimension such as the diameter of the lens is less than  
18 the corresponding dimension of the iris so that the margins of the  
19 lens when in the normal applied position are within the iris 11. How-  
20 ever, the lens is not so small that it will not completely cover the  
21 pupil 12 when the iris 11 is in its fully opened position. The lens  
22 may, therefore, be defined as to size as being within the limbus of  
23 the eye but beyond the maximum opening of the iris. Another  
24 characteristic of the lens is that it has a radius of curvature  
25 slightly greater than the radius of curvature of the cornea to which  
26 it is applied or, in other words, the lens is slightly flatter on its  
27 concave side than the convexity of the cornea. In this manner the  
28 major portion of the contact between the lens and the cornea will  
29 occur near the center of the cornea or in the neighborhood of the  
30 location indicated at 17, whereas at the top and bottom of the lens,  
31 as well as at the two sides, there will be slight clearance spaces  
32 18 and 19. I find it advisable to have a slight difference between

1 the radius of curvature of the concave side of the lens and the  
2 convex surface of the cornea so as to reduce irritation. The  
3 clearance spaces 18 and 19, as well as the clearance spaces at the  
4 sides of the lens, enable the natural eye fluids to enter between  
5 the lens and the cornea which is, of course, desirable. The presence  
6 of this fluid in these clearance spaces probably contributes to the  
7 holding of the lens in place on the cornea such as by capillary  
8 action. The optical correction may be ground either on the interior  
9 or exterior surface of the lens 16 or both, and in some instances  
10 the optical correction ground on the interior surface of the lens is  
11 adequate to provide the clearance spaces 18 and 19. In other words,  
12 the lens blank may initially have an internal radius of curvature  
13 exactly conforming to the radius of curvature of the cornea but on  
14 grinding the optical correction on the interior of the lens its con-  
15 cave radius of curvature may be so altered thereby as to provide the  
16 clearance spaces which are of adequate size. These clearance spaces  
17 need not be great and, for example, if the radius of curvature of  
18 the cornea measures 7.8 millimeters the radius of curvature of the  
19 concave side of the lens need only be 7.9 or possibly 8.0 millimeters.

20 I find it advantageous in the usual lens to bevel the con-  
21 cave surface adjacent the margins, as indicated at 20. When the lens  
22 is in applied position on the eye the eyelid, in blinking or closing  
23 thereover, will tend to disturb the position of the lens on the cornea.  
24 Usually most of this disturbance is created by the upper eyelid which,  
25 on opening, may tend to lift the lens from the full line position  
26 shown in Fig. 1 to a dotted line position therein and, as illustrated  
27 in the dotted line position the lens may be temporarily shifted up-  
28 wardly so that it has crossed over the limbus portion 15 and may even  
29 extend partially onto the sclera 14. This displacement of the lens  
30 is usually only temporary and subsequent blinking or closing of the  
31 eyelid will tend to restore the lens to its centralized position with  
32 relation to the cornea. As the limbus portion 15 usually protrudes

1 slightly the internal bevel 20 facilitates the slipping of the lens  
2 thereover so that when displacement of the lens does take place it  
3 may occur without causing irritation. When the lens is returned to  
4 the cornea in the course of subsequent blinking, it tends to  
5 centralize itself thereon.

6 Any necessary correction may be ground on the surfaces of  
7 the lens and in some instances the correction required is such that  
8 the lens must be either relatively thick or have relatively thick  
9 margins. Where the lens is thick or has thick margins the external  
10 or convex surface may be beveled as indicated at 21 to facilitate the  
11 passing of the conjunctiva of the eyelids thereover. Both bevels 20  
12 and 21 should be relatively small and should be confined to the dis-  
13 tance between the maximum opening of the iris and the limbus portion  
14 15 so that the user under no circumstances will look through a beveled  
15 portion of the lens.

16 In Fig. 4 a slightly modified form of construction is  
17 illustrated wherein the lens, instead of being circular in form, is  
18 slightly ovate or elliptical. The lens may be given any shape re-  
19 quired to properly fit the size and shape of the cornea to which it  
20 is applied.

21 It will be noted from the above described construction that  
22 the improved contact lens is relatively simple. A feature of its  
23 construction resides in the fact that in its normal position shown  
24 in Fig. 1 no portion of the lens contacts the sclera and consequently  
25 the irritation generally produced when contact lenses are pressing  
26 against the sclera is entirely avoided. Furthermore, the prescribing  
27 of lenses of this character is greatly simplified. Whereas heretofore  
28 it has generally been necessary to form a mold of the eye to deter-  
29 mine the size and shape of the cornea and the size and shape of the  
30 surrounding sclera, in the present construction the size and shape  
31 of the sclera becomes relatively immaterial. The prescription for the  
32 required correction can be determined in the usual manner and the

1 corneal portion of the eye can then be measured both horizontally  
2 and vertically by any conventional measuring instrument used for this  
3 purpose. With the measurements of the cornea known both as to height,  
4 width and radius of curvature and the required correction known, a  
5 lens manufacturer can easily fill a prescription for contact lenses  
6 with reasonable assurance that the lens will fit the patient properly.  
7 In so doing his skill and judgment may be required in determining  
8 whether or not a lens blank having a larger internal radius of curva-  
9 ture than that of the cornea shall be used or whether the lens may  
10 have the same internal radius of curvature and the correction ground  
11 on the inside of the lens be relied upon to form these clearances.  
12 In the use of the improved lens it is unnecessary to try repeatedly  
13 and reject various solutions or fluids before wearing time can be  
14 gained inasmuch as no solution need be used at all with the present  
15 lens. However, in applying the lens embodying the present invention  
16 it is frequently advisable to moisten its surfaces so that at the  
17 time of initial application there will not be any discomfort <sup>START</sup>  
18 particularly of the eyelids. No special fluid or solution is re-  
19 quired for this purpose and ordinary water not harmful to the eye  
20 may be employed to moisten the lens. When the lens is worn its  
21 presence can rarely be detected. Even the bevels at the margins of  
22 the lens can rarely be detected due to the fact that they are within  
23 the iris portion, the edges of the lens particularly at the sides of  
24 the iris being backgrounded by the colored iris and to a large extent  
25 undiscernible and although the lens at the top and bottom of the iris  
26 projects or slides beyond the iris these portions are normally con-  
27 cealed by the upper and lower eyelids.

28 I find that lenses of this character can be worn over pro-  
29 longed periods of time - periods of twelve and thirteen hours of con-  
30 tinuous use being not unusual - without causing objectionable irrita-  
31 tion and without causing cloudiness or rainbow and halo effects which  
32 are frequently produced with the usual contact lens in very much

1 shorter periods of time.

2 . I find it advisable to mark the lenses so as to be able to  
3 distinguish the lens for the right eye from the lens for the left eye  
4 and to indicate which side of the lens should be positioned uppermost  
5 and lowermost as the case may be. Such markings may be very small  
6 and when applied should be applied very close to the margin of the  
7 lens and if the lens is beveled they should be applied to a bevel.

Various changes may be made in the details of construction without departing from the spirit and scope of the invention as defined by the appended claims.

I claim:

1. A contact lense applicable to the cornea of the human eye consisting of a generally concavo-convex section of transparent material <sup>ground to correct for visual deficiency and</sup> having a diameter slightly less than the diameter of the limbus of the cornea of the human eye but greater than the maximum pupil opening thereof.
2. A contact lense applicable to the cornea of the human eye consisting of a generally concavo-convex section of transparent material <sup>ground to correct for visual deficiency and</sup> having a diameter slightly less than the diameter of the limbus of the cornea of the human eye but greater than the maximum pupil opening thereof, the inside surface of said section being characterized by having a curvature slightly flatter than the curvature of the cornea of the eye to which it is applicable.
3. A contact lense applicable to the cornea of the human eye consisting of a generally concavo-convex section of transparent material <sup>ground to correct for visual deficiency and</sup> having a diameter slightly less than the diameter of the limbus of the cornea of the human eye but greater than the maximum pupil opening thereof, said lens having a bevel formed thereon on the concave side thereof.
4. A contact lens applicable to the cornea of the human eye consisting of a generally concavo-convex section of transparent material <sup>ground to correct for visual deficiency and</sup> having a diameter slightly less than the diameter of the limbus of the cornea of the human eye but greater than the maximum pupil opening thereof, said lens

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having a bevel formed thereon on the concave side thereof, said bevel being also disposed wholly between the limbus portion of the eye and the maximum pupil opening.

5. A contact lens applicable to the cornea of the human eye consisting of a generally concavo-convex section of transparent material <sup>ground to correct for visual deficiency and</sup> having a diameter slightly less than the diameter of the limbus of the cornea of the human eye but greater than the maximum pupil opening thereof, said lens being internally and externally beveled adjacent its margins.

6. A contact lens applicable to the cornea of the human eye consisting of a generally concavo-convex section of transparent material <sup>ground to correct for visual deficiency and</sup> having a diameter slightly less than the diameter of the limbus of the cornea of the human eye but greater than the maximum pupil opening thereof, said lens being internally and externally beveled adjacent its margins, both of said bevels being wholly disposed between the limbus portion and the maximum pupil opening of the eye to which it is applicable.

7. A contact lens applicable to the cornea of the human eye consisting of a generally convex section of transparent or semi-transparent material <sup>ground to correct for visual deficiency</sup> and characterized by being disposed wholly within the limbus of the eye to which it is applicable.

8. A contact lens applicable to the cornea of the human eye consisting of a generally convex section of transparent or semi-transparent material <sup>ground to correct for visual deficiency</sup> and characterized by being disposed wholly within the limbus of the eye to which it is applicable and having a flatter curvature than the curvature of the cornea to which it is applicable.

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In testimony whereof I have signed my name to this specification.

*Kevin M. Tuohy* @ □

OATH

State of California, }  
County of Los Angeles } ss.

KEVIN M. TUOHY

the above named petitioner, being sworn, deposes and says that he is a citizen of the United States and resident of Los Angeles

in the County of Los Angeles

State of California, and that he verily believes himself to be the original, first, and sole inventor of the improvements in CONTACT LENS

described and claimed in the annexed specification; that he does not know and does not believe that the same was ever known or used before his invention or discovery thereof, or patented or described in any printed publication in any country before his invention or discovery thereof, or more than two years prior to this application, or in public use or on sale in the United States for more than two years prior to this application; that said invention has not been patented in any country foreign to the United States on an application filed by him or his legal representatives or assigns more than twelve months prior to this application, and that no application has been filed by him or his representatives or assigns in any country foreign to the United States.

(Applicant sign here) *Kevin M. Tuohy*

Subscribed and sworn to before me this 21<sup>st</sup> day of February, 1948

(Signature of Officer administering oath) *Rachel B. Olson*

Notary Public in and for the County of Los Angeles, State of California.

My Commission Expires December 8, 1954

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PRINT OF DRAWING AS  
ORIGINALLY FILED

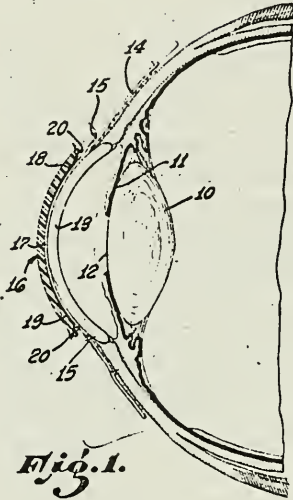


Fig. 1.

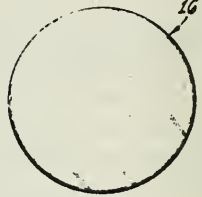


Fig. 2.

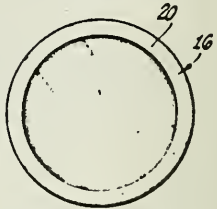


Fig. 3.

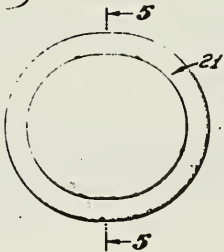


Fig. 4.

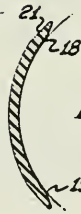


Fig. 5.

INVENTOR,  
*Kevin M. Tuohy*  
BY *Hazard & Miller*  
ATTORNEYS.

APPROVED ONLY  
COMMISSIONER OF PATENTS  
WASHINGTON 25, D. C.

DEPARTMENT OF COMMERCE  
UNITED STATES PATENT OFFICE  
WASHINGTON

PAPER No. 3

All communications respecting  
this application should give the  
serial number, date of filing,  
and name of the applicant.

See find below a communication from the EXAMINER  
in charge of this application.

MDR/ech

*Lawrence L. Kingland*  
Commissioner of Patents.

Hazard & Miller  
706 Central Bldg.  
Los Angeles, Calif.

Division: 7  
Applicant: Kevin M. Tuohy

Ser. No. 12,040  
Filed Feb. 28, 1945  
For CONTACT LENSES

500 12-27312-7

MAILED

NOV 9 1940

This application has been examined.

References made of record:

Obrig (Text) - Contact Lenses - 1942 - Pub. by the Chilton Co. -  
Philadelphia, Pa. - 470 pg. - pgs. 129 & 130  
especially cited - Copy in Div. 7

The Optician (Pub.) "High Precision Contact Lenses" - Sept. 5, 1947 -  
P. 1 especially cited - copy in Division 7 - 88/54.5  
and Published by The Hatton Press Ltd. - 72-78 Fleet  
St. - London, England - EC4

On allowance of a claim revision as to form may be  
required (Order 5267).

Claims 1, 2, 7 and 8 are rejected as substantially met by  
the Kalt contact lenses described on pages 129 and 130 of Obrig.  
It is obvious that the Kalt lenses could be employed for eyes  
having corneal curves which are "sharper" than that of the inside  
surfaces of these lenses.

Claims 3, 4, 5 and 6 are rejected as unpatentable over  
the Kalt lenses (Obrig) taken especially in view of the Optician  
publication. The Kalt lenses either are provided with beveled  
edges as is conventional or obviously might be so provided especially  
in view of the Optician publication teachings. The extent of

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corneal coverage will be dependent upon the particular eye on which the lens is to be disposed and is of no patentable significance.

All claims 1 to 5 inclusive are rejected.

George Stanlin,

MR.

Examiner



ASSIGNMENT #

#4

Div. 7

Paper No. 4

IN THE UNITED STATES PATENT OFFICE

Item

In re Application of

KEVIN M. TUOHY

Serial No. 12,040

Filed Feb. 28, 1948

For: CONTACT LENS

EXHIBIT 1

JAN 4 1949

U.S. PATENT OFFICE

---oOo---

Los Angeles 14, Calif. December 2, 1948

Commissioner of Patents

Washington 25, D.C.

Sir:

In response to the Office Action dated November 9, 1948, please amend the above-entitled application as follows:

Claims 1 to 6, inclusive, line 3 of each, after "material" insert -- ground to correct for visual deficiency and <:

Claims 7 and 8, line 3 of each after "material" insert -- ground to correct for visual deficiency --

REMARKS

A reconsideration is respectfully requested for the claims in this case for the following reasons.

The principal reference relied upon by the Examiner is nothing more than the description of what appears to have been an abandoned experiment performed in Europe. It reads as follows:

"E. Kalt

"About the same time that August Muller was experimenting with contact lenses, an optician, E. Kalt, independently carried on an investigation of his own. He ground some small lenses to correct keratoconus which had no scleral band, and rested at the

Ser. No. 12,040 - Paper No. 4

edge of the cornea. They were designed to exert some pressure on the apex of the oonus in an attempt to reduce the ectasia as well as to correct the visual error. As might be expected, they were unsuccessful."

Thus, the author Obrig correctly describes these experiments as being unsuccessful and the question presented here is briefly as follows:

The conducting of an unsuccessful experiment in Europe would obviously be no bar to the obtaining of a valid patent in the United States. It is well settled that an unsuccessful and abandoned experiment even if performed in the United States is no bar to the obtaining of a valid patent in the United States. It is also well settled that public use in a foreign country is not a bar to obtaining a valid patent in the United States. Manifestly, the conducting of an abandoned experiment in Europe could not bar the obtaining of a valid patent in this country.

The question then is: Is the publication of the Obrig book in this country describing the unsuccessful experiment by Kalt in Europe on a higher plane? In other words, if the unsuccessful experiment of Kalt itself would not be a bar whether performed in Europe or in this country, would the printed description of that unsuccessful experiment constitute a bar? It is respectfully submitted that it would not.

In order to constitute an anticipation a prior patent or a prior publication must disclose to the reader in adequately clear terms sufficient information so that the reader can manufacture the alleged anticipating structure. The description of the Kalt experiment merely informs the reader that if an optician should manufacture a small lens having no scleral band which will rest at the edge of the cornea and exert some pressure on the apex of the conus for the purpose of correct-

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keratoconus that his lenses will be unsuccessful. The attention of the Examiner is respectfully directed to Ingersoll v. Bethlehem Steel Co., 15 U.S.P.Q. 252,255:

"The question still is whether the prior publication is in such full, clear and exact terms as to enable any person skilled in the art to construct the invention to the same practical extent as he would be enabled to do if the information was derived from a prior patent. This is the rule laid down in Seymour vs. Osborne, 11 Wall 516,555, and followed in Cohn vs. U.S. Corset Company, 93 U.S. 366; Downtown vs. Yeager Milling Company, 108 U.S. 466; Rames vs. Andrews, 122 U.S. 40 and many other decisions."

In Balaban v. Polyfoto Corp., 55 U.S.P.Q. 141,145, the Court said:

"In addition to that, as the Burrows & Colton disclosure is merely a publication, it is discredited under the rule that an inoperative device (and the evidence shows that the device was inoperative) disclosed in a printed publication cannot anticipate a later operative device. Permutit Co. v. Harvey Laundry Co., 279 F. 713,719 (C.C.A. 2)."

In Ex parte Schwenk, Block and Whitman, 73 U.S.P.Q. 85, the Board of Appeals said:

/"Isolated experiments found in the literature are insufficient to anticipate a complete process which they do not suggest and we find the literature references referred to in the specification of little help in this regard. We do not sustain this ground of rejection."

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Therefore, it is respectfully submitted that the reference relied upon by the Examiner is insufficient to base a rejection upon for the purpose of rejecting the applicant's claims. First, there is no adequate disclosure; second, the disclosure is nothing more than a description of an inoperative device or unsuccessful experiment, and third, being nothing more than the description of an abandoned experiment it could have no greater anticipatory effect than the abandoned experiment itself. It simply does not teach adequately how to produce the applicant's lens.

Kalt's lens was intended to correct keratoconus, namely he merely proposed using the lens to press in a conical cornea to make it conform if possible to the spherical interior shape of the lens. To exert this pressure on the cornea and hold the cornea in the form of a sphere rather than in the form of a cone required some pressure on the apex of the conus and this pressure had to be obtained by having the edge of the lens grip on the edge of the cornea. Manifestly, this action would not only prevent the flow of eye fluids over the cornea but would probably stifle blood circulation near the edge of the cornea. Kalt's lens consequently could not be worn for any reasonable length of time. In the applicant's construction, on the other hand, as brought out in some of the claims the interior curvature of the lens has a greater radius than the radius of the cornea so that there will be a clearance space at 18 for the entry of eye fluids. Consequently, the eye fluids can continually wash over the surface of the cornea and they are in no way obstructed. Furthermore blood circulation is in no way hindered by the application of applicant's lens. One fundamental distinction between the applicant's lens and Kalt's resides in the fact that Kalt's lens "rested at the edge of the cornea." In the applicant's lens the lens does not rest on the edge of the cornea but instead has its center merely riding upon or supported by the center of the cornea allowing



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the eye fluids to enter between the cornea and the lens in the clearance space at 18. This clearance space is probably one of the important features that makes the applicant's lens a success whereas in Kalt where the lens rested at the edge of the cornea failure necessarily followed.

Another distinction brought out by the present amendment to the claims resides in the fact that in the applicant's lens the lens is ground to correct for visual deficiency. In Kalt's lens apparently the lens was not ground to correct for nearsightedness or farsightedness but an attempt was merely made to correct keratoconus, namely the restoration of a conical cornea to its spherical shape. As far as the applicant knows, no one heretofore has devised a lens designed to cover the cornea fully and having no scleral band and which has a correction ground thereon to correct a visual deficiency.

To demonstrate that the applicant's lens is a success as contrasted with Kalt's unsuccessful experiment, there is transmitted herewith and filed herewith photostatic copies of a large number of newspaper articles, publications, and reprints pertaining to the applicant's lens. It is possibly an understatement to state that the applicant's lens which is being manufactured and distributed by Bausch & Lomb Laboratories, has created considerable stir in ophthalmological circles. However, of the exhibits transmitted herewith probably the most interesting is the letter of Byron Smith dated May 13, 1948, addressed to the applicant. For the Examiner's information Byron Smith is an eye specialist and a practising M.D. in New York. The applicant is informed that he is also a Fellow of the Royal Academy of Surgeons and served on the U.S. Surgeon's General Staff during the last war. This letter reads in part as follows:

"Dr. Vail also advised me of the research work at Columbia being carried out by the Army under the direction of Mr. Obrist

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and Dr. A.B. Reese. He suggested that I tell them of your discovery so that the Columbia project could be terminated and also the Army research fund transferred to you."

The Mr. Obrig referred to is the same Mr. Obrig who is the author of the reference on which the Examiner relies. Apparently the Columbia research work undertaken by Mr. Obrig and Dr. Reese relates to contact lenses. However, Mr. Obrig apparently was unable to gain any suggestion from his own book or his description of the Kalt experiment to enable him to solve the problem. According to Dr. Byron Smith, Dr. Vail of Northwestern University suggested that Mr. Obrig and Dr. Reese be informed of the applicant's invention and that Mr. Obrig and Dr. Reese discontinue all further efforts and save the Army money by discontinuing use of the Army research fund. We do not know how to establish with greater clarity that the reference cited by the Examiner is no anticipation than to show that its own author was unable to derive a suggestion therefrom as to how to construct the applicant's improvement.

Of the other letters enclosed herewith the Examiner will note the letter and telegram of Col. Austin Lowry, Jr. affiliated with the Army Medical Center at Walter Reed General Hospital. This officer states in his letter of September 13, 1948, that he was greatly impressed by the applicant's lens following a demonstration to the extent of asking for information and literature on it. Attention is also directed to the letter of Col. Victor A. Byrnes of the Air University School of Aviation Medicine at Randolph Field, Texas. The other letters and exhibits transmitted herewith are to a large extent self-explanatory, and constitute but a few of those received by the applicant or those associated with him that were recently shown to the attorneys of record. It is believed that considering these various exhibits collectively that they will demonstrate that eye specialists distributed throughout the country who witnessed demonstrations in

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San Francisco, Chicago, and New York have generally been highly enthusiastic about the possibilities of the applicant's lens. With the natural conservatism of their profession they are now only waiting for the results of long tested usage before placing their unqualified endorsement thereon. This long tested usage can only be secured with time but at present all indications are that the applicant's lens is highly successful in contrast with the abandoned experiment of Sault.

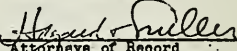
With respect to claims 3, 4, 5, and 6 a reconsideration is respectfully requested as each of these claims specifies that there is a bevel formed on the concave side of the lens. This bevel is nearly as important to the success of applicant's lens as the feature of having the radius of curvature greater than the radius of curvature of the cornea. It facilitates the entry of the natural eye fluids between the lens and the cornea. The advertisement cited by the Examiner merely discloses a full or complete contact lens having a scleral band the edges of which are rounded. These rounded edges are primarily merely for the purpose of enabling the lens to be inserted in the eye without danger of cutting. The edges are too remote from the cornea to have any effect with respect to facilitating the entry of the natural eye fluids between the lens and the cornea, and in fact contact lenses having scleral bands universally have eye fluids supplied between the lens and the eye. It is respectfully submitted that it is improper in rejecting these claims for the Examiner to combine an admittedly unsuccessful or inoperative reference with another reference for an entirely different type of construction to work out a basis for rejection.

In conclusion, it is doubtful whether there is any application

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in the United States Patent Office wherein in the course of less than one year the applicant can make a showing as herein made to the effect that the profession to which the invention relates is so highly impressed as in this case. It is believed that the Patent Office should consequently recognize the merit of this improvement by granting the claims herein submitted.

Respectfully submitted,

  
Attorneys of Record

DEPARTMENT OF COMMERCE  
UNITED STATES PATENT OFFICE  
WASHINGTON

PAPER No. 8

All communications respecting this application should give the serial number, date of filing, and name of the applicant.

MAILED

See find below a communication from the EXAMINER charge of this application.

MDR/baj

Hazard & Miller  
706 Central Building  
Los Angeles, California

*Lawrence B. Kingland*  
Commissioner of Patents

JUL 6 1949

Division: 7  
Applicant: Kevin M. Tuohy

Ser. No. 12,040  
Filed Feb. 28, 1948  
For CONTACT LENS

Responsive to affidavits filed June 4, 1949.

Additional references made of record:

"Contact Lenses" (publication) by E. Freeman O. D. published in The Optometric Weekly; Feb. 28, 1946; p. 271 and 276 Copy in Division 7.

The New Hambin-Daillo Contact Lens [pub] from p. 143 of "The Optician" April 1, 1938 - Copy in Division 7; 88/54.5

Related Art

Linke 2,000,768 May 7, 1937 88/54.5  
Obrig (Text) "Contact Lenses" 1942 pub. by the Chilton Co., Phil., Ps. -470 pg. - pgs. 370-373, inclusive on which is a translation of the French patent No. 805,592 Copy in Div. 7  
Volle 722,059 Mar. 9, 1947 p. 38/54.5  
"The Design of Contact Lense" by Vincent Hill published in "The Optician" May 23, 1947 p. 335 to 337, inclusive and p. 341 copy in Division 7 88/54.5

Claims 1 to 8, inclusive, are rejected as indefinite and not particularly pointing out invention. The claims call for a contact lens which is of a size smaller than that of the diameter of the cornea but no mention is made of the particular inside curves to be ground thereon with the possible exception of the broad recitation in claims 2 and 8 that said inner surface has a curvature flatter than the cornea to which it is applicable. Obviously a lens which has a deep inside curve and hence presents a large area (for fluid or air) and rests on the periphery of the lens (and hence the cornea) or one which contacts the center of the cornea only and radial thereto departs in a more or less tangential fashion from contact with the cornea (by reason of a very shallow curve as recited with respect to that of the

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Pat. No. 12,040

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cornea) would not necessarily serve applicant's purpose or even be tolerable.

Claims 1, 2, 7 and 8 are rejected/<sup>as</sup>unpatentable over Kalt of record taken especially in view of Hamblin-Dallos (Obrig bot. p. 159, top p. 160) or Freeman above cited. Kalt shows it to be old to fashion a contact lens which is devoid of a scleral band. The Kalt lens apparently was designed for use in Keratoconus however the adaptation for conventional cases would not require invention being an expected extension of use. The Kalt lenses apparently had a slight central contact with the cornea in the pathologic cases (as was the general practice) and hence the inside curve was a slightly shallower than that of the cornea on which it rested as is the case in applicant's device. The standard practice in the fitting of contact lenses involves clearance of the limbal area as pointed out in the secondary references and this would necessitate bridging of this area in Kalt or disposition of the periphery of the lens entirely central to the limbal zone, as appears obvious. Additionally, no invention is seen in omitting the scleral band in the lenses described by Freeman or those of Dallos (which are designed to contact about four-fifths of the cornea, bridge the limbus and hence are of slightly flatter curve than that of the cornea) especially in view of Kalt which shows this to be an old construction. Applicant's exhibits have been examined but are not persuasive as to the determination that a patentable advance has been negotiated.

Claims 3, 4, 5, and 6 are rejected as unpatentable over the references as applied above in the rejection of claims 1, 2, 7 and 8 especially in view of the Optician publication of record. To merely provide the contact lenses of the references modified as suggested, with a beveled edge, a notoriously old expedient in the art, is not considered to involve invention,

*J. A. W. W. W.*  
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No. 12,040 .

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since no unexpected results would appear to obtain.

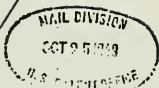
All claims, 1 to 8, inclusive are rejected.

This application should be prepared for final action.

No further amendments that do not place the case in condition for allowance or better form for appeal will be entered after final action unless accompanied by a proper showing of good and sufficient reasons why they were not earlier presented. Rule 116 and Commissioner's Notice of April 26, 1948; 610 O. G. 268.

*George Hanlin,*  
Examiner

*WDR.*



DIVISION 7

OCT 26 1949

AMENDMENT

Paper No. 9

U. S. PATENT OFFICE  
IN THE UNITED STATES PATENT OFFICE

APPLICATION OF  
 KEVIN M. TUOHY  
 SERIAL NO. 12,040  
 FILED FEBRUARY 28, 1948  
 For CONTACT LENS-

Division 7

--ooOoo--

Los Angeles 14, California. October 21, 1949

Hon. Commissioner of Patents

Washington 25, D. C.

Sir:

In response to Office Action dated July 6, 1949,  
 please amend the above identified application as follows:

Page 1, line 10, change "geen" to -- been -- .

Page 3, line 6, erase "at" . ✓

Rewrite the claims in this case as follows:

1. A contact lens applicable to the human eye comprising a concavo-convex lens formed of light-transmitting material having a marginal size smaller than the limbus portion of the eye to which it is applicable but larger than the maximum iris opening, said lens having a radius of curvature on its concave side slightly greater than the radius of curvature of the cornea to which it is applied so that radially from the center of the lens there will be a small but gradually increasing clearance for the entry of natural eye fluids between the lens and the cornea, said lens being ground to correct for visual deficiency.

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Ser. No. 12,040

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20. A contact lens applicable to the human eye comprising a concavo-convex lens formed of light-transmitting material having a marginal size smaller than the limbus portion of the eye to which it is applicable but larger than the maximum iris opening, said lens having a radius of curvature on its concave side slightly greater than the radius of curvature of the cornea to which it is applied so that radially from the center of the lens there will be a small but gradually increasing clearance for the entry of natural eye fluids between the lens and the cornea, said lens being ground to correct for visual deficiency and having a bevel at its marginal edges on the concave side thereof.

11. The method of fitting a contact lens which includes determining the size of the cornea, its radius of curvature and the correction necessary to correct for visual deficiency and applying a concavo-convex lens which will lie wholly within the limbus portion of the eye and which has incorporated therein the correction for visual deficiency and which is characterized by having a radius of curvature on its concave side which is slightly greater than the radius of curvature of the cornea whereby the natural eye fluids may occupy the clearance space thus afforded between the concave side of the lens and the cornea.

12. The method of fitting a contact lens which includes determining the size of the cornea, its radius of curvature and the correction necessary to correct for visual deficiency and applying a concavo-convex lens which will lie wholly within the limbus portion of the eye and which has incorporated therein the correction for visual deficiency and which is characterized by having a radius of curvature on its concave side which is slightly greater than the radius of curvature of the cornea and which has its margins beveled on

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Ser. No. 12,040

- 3 -

63' the concave side whereby the natural eye fluids may enter beneath the bevel and occupy the clearance space afforded by the difference in the radii of curvature of the concave side of the lens and the cornea.

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R e m a r k s

The claims have been re-written so as to present them in what is believed to be better form. Fred H. Miller, of the attorneys of record, wishes to acknowledge with appreciation the interviews courteously granted in connection with this case during the first ten days of August, 1949, by the Examiner in charge of this application, the Chief Examiner of Division 7, and the Associate Examiner, Mr. Gonzales (we are not sure of the name of the latter Examiner).

In the course of these interviews it was believed that a claim which included the bevel on the marginal edges on the concave side of the lens was clearly allowable over the prior art in that it defined a lens structurally different from any lens in the prior art. In the course of the interview between the Examiner in charge of this case, Fred H. Miller, and Mr. Gonzales, it was thought that a claim drawn to the method of fitting the lens should probably be allowable. However, it was suggested that the application be re-filed in order to point up the method of fitting in the specification. On careful reconsideration of the application and a discussion between Fred H. Miller of the attorneys of records and the applicant, it is believed that the re-filing of the application is unnecessary. The devices for measuring the radius of curvature of the cornea are well known and are conventional. The present specification makes adequate reference to the method of fitting

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Ser. No. 12,040

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to support claims of the character herein presented as claims 11 and 12. Thus, as stated at the bottom of page 6 the prescription for the required correction can be determined in the usual manner and the corneal portion of the eye can be measured both horizontally and vertically by any conventional measuring instrument used for this purpose. The specification goes on to say that with the measurements of the cornea known both as to height, width and radius of curvature and the required correction known, the lens manufacturer can then fill the prescription. In so doing he is intended to follow the construction previously described in the specification, namely, to select or prepare a generally concavo-convex lens which will have an internal radius of curvature slightly greater than the radius of curvature of the cornea which has been measured. Such a lens will either have a size such that it will lie within the limbus portion or it will be made to have such a size. On this lens the correction to correct for visual deficiency will be ground as determined from the prescription obtained in the conventional manner. It may be that, as the natural eye fluids which enter between the lens and the cornea will themselves form a type of lens, a modification or alteration of the prescription ground on the lens will have to be made to compensate for the refraction of the lens formed by the natural eye fluids. This, of course, is to be assumed to be a part of the skill of the manufacturer or the person skilled in the art to whom the specification is addressed. However, if the application were to be re-filed as suggested by Mr. Gonzales, about all that could be done would be to describe how a prescription is obtained in the conventional manner by an optician or optometrist, how he would determine the radius of curvature using any one of several conventional ophthalmometers, and how he would measure the height and width of the cornea. These are all conventional

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Ser. No. 12,040

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practices and it is not seen that anything would be gained by re-filing and describing these conventional practices over or above what is already set forth at the bottom of page 6 and the top of page 7 of the present specification. For this reason method claims 11 and 12 are presented herein as it is believed that they can be made in the present application and should be found allowable.

There remains for consideration claim 9. The Examiner in charge of this application, in the course of the interviews, expressed himself as being of the belief that such a claim as claim 9 could not be found allowable because it does not define a structure except with relation to the dimensions of the eye to which it is applied. This is true but it is believed that the present case presents a rather unique situation and that because of the unique situation a claim of the type of claim 9 should be found allowable. In a case of this character it is difficult to positively say whether the invention really resides in the production of the lens that will fit the eye or whether the invention resides in the method of fitting. The Examiners that were interviewed seem to be of the opinion that the invention resided more in the method of fitting. They may be right. On the other hand, their decision is not final. In other words, a court in an infringement suit might take a different attitude from that of the Examiners, namely, that the invention resides in the lens itself made to fit an eye and having certain structural requirements with relation to the eye to which it is applied. The applicant herein should not have his position jeopardized merely because the Examiners in charge of the application are of one opinion whereas a court in an infringement suit might have a different opinion. It is believed that the applicant herein certainly has made an invention and the record already adequately establishes that the optical world has been considerably disturbed by this improve-

Ser. No. 12,040

- 6.

ment. This being the case it is believed that in all fairness to the applicant, claim 9 should be allowed as well as claims 11 and 12. If a court in an infringement suit should agree with the Examiners that the invention really resides in the method rather than in the article, such a court can sustain claims 11 and 12 and hold claim 9 invalid. No harm is done to the applicant herein nor is any harm done to the public or to the infringer. On the other hand, if the court should be of a different opinion from that of the Examiners and take the position that the invention resides in the lens made up as it is with relation to the eye rather than in the method of fitting, then the rights of the applicant herein are preserved. The court under such circumstances could sustain claim 9 and hold claims 11 and 12 invalid. No harm is done to the public nor to the infringer. But if the Examiners adhere to their present position that claim 9 should be rejected and claims 11 and 12 only allowed, then the applicant herein may suffer grievous injury if a subsequent court should hold that the invention really resided in the article defined by claim 9 instead of in the method of fitting. It is well settled practice that where an application is presented to the Patent Office wherein reasonable doubts arise, all doubts shall be resolved in the applicant's favor. This salutary practice arises from the fact that subsequent reviewing courts do not always follow the holdings of the Examiners. It is believed that a reasonable doubt exists here of whether the invention resides in the article or in the method and the Examiners should resolve these doubts in the applicant's favor. In so doing all of the applicant's rights will be preserved. However, if the applicant herein is forced to accept the allowance of only claims 10, 11 and 12, some of his rights may become irretrievably lost particularly if a reviewing court takes a different position from that heretofore expressed by the Examiners.

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The constructive criticism and suggestions made in the course of the interviews above mentioned have been distinctly appreciated and if the Examiner should have any further suggestions to make they will be more than welcome.

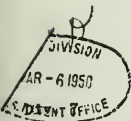
A reconsideration and an allowance is accordingly respectfully requested.

Respectfully submitted,

HAZARD & MILLER

By Frederic H. Miller  
Attorneys of Record.

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DIVISION 7

MAR 8 1950

Paper No. 11

Letter  
# 11

U. S. PATENT OFFICE

IN THE UNITED STATES PATENT OFFICE

In re Application of

KEVIN M. TUOHY

Serial No. 12,040

SUPPLEMENTAL AMENDMENT

Filed February 28, 1948

CONTACT LENS

---oOo---

Los Angeles 14, Calif., March 1, 1950.

Commissioner of Patents

Washington 25, D.C.

Sir:

During a visit to Washington, D.C. in the latter part of January 1950, by Fred H. Miller of the attorneys of record, reference was made in a short oral interview with the Examiner in charge of this application to a case appearing in the United States Patents Quarterly relating to claims defining structure with relation to human anatomy. Fred H. Miller promised to call the Examiner's attention to this case upon returning to California. The case referred to is Ex parte Jones, 84 USPQ 24, from which the following is quoted:

"The claims were rejected on the ground that they are deemed informal and indefinite. The basis for this position is that the claims recite the relation of many of the parts to each other through their relation to the patient's head, neck, face, or body. \* \* \* \*We have examined the claims with care and we notice that it is sufficient to define the relation of the various parts if it be assumed that the head and neck of a human being defines a line passing centrally through the head and neck. With this line or axis

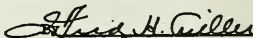
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Ser. No. 12,040

established for reference, the location of the various parts of applicant's clamp referred to in the claims may be established. This mode of definition is not as convenient to follow as one which is confined to the geometry of the clamp itself. However, it has long been the practice in the Patent Office, as will be seen by reference to the patents called to our attention by appellant, to permit devices for application to anatomy to be referred to normal anatomy to assist in defining the orientation of the parts. We cannot say that this is improper. Admittedly directions and distances are not precisely determined in this matter (sic, probably manner), but this art does not ordinarily require the same precision as the machine tool art for example."

Respectfully submitted,

HAZARD &amp; MILLER





DEPARTMENT OF COMMERCE  
UNITED STATES PATENT OFFICE  
WASHINGTON

PAPER No. 10

All communications respecting this application should give the serial number, date of filing, and name of the applicant.

Find below a communication from the EXAMINER in charge of this application.

MDR/och

Hazard A. Miller  
706 Central Bldg.  
Los Angeles, Calif.

*John A. Marshall*

Commissioner of Patents.

Division 7 --- Room 7725  
Applicant Kevin E. Tuohy

Ser. No. 12,040  
Filed Feb. 28, 1948  
For CONTACT LENSES

MAILED

MAR 8 1950

Responsive to amendment filed October 25, 1949.

Claims 11 and 12 are rejected on the ground that they involve matter for which there is no disclosure or teaching in the application as originally filed. These claims set forth a method of fitting contact lenses but such is brought to light for the first time, for a close reading of the objects of invention or specification and claims of the original application fail to reveal a teaching of a new method. Although applicant contends the various steps of "determining the size of the cornea, its radius of curvature and correction necessary" are conventional in a complete examination, of the eyes, still it would appear obvious that if such procedure constituted a novel approach or concomitant to the fitting of contact lenses it would of necessity constitute a part of the disclosure, which is not the case here.

Claims 1 to 8 inclusive have been cancelled.

Claims 9 and 10 are considered allowable.

Claims 11 and 12 are rejected.

Applicant should prepare for final action.

*J. J. Gonzalez*  
Examiner

MDR.

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AMENDMENT

DIVISION 7

Div. 7

Room 7725

APR 25 1950

Paper No. 11

U. S. PATENT OFFICE

IN THE UNITED STATES PATENT OFFICE

In re Application of

KEVIN M. TUOHY

Serial No. 12,040

Filed February 28, 1948

CONTACT LENS

---oOo---

Los Angeles 14, Calif., April 18, 1950

Commissioner of Patents

Washington 25, D.C.

Sir:

In response to the Office Action dated March 8, 1950,  
please amend the above-entitled application as follows:

Cancel claims 11 and 12.

## REMARKS

The above amendment is made to place the case in  
condition for allowance.

Cancellation of these claims, however, is not to be  
construed or interpreted as an abandonment thereof as the  
applicant is now contemplating filing a continuation-in-part  
application in which these claims may be presented.

Respectfully submitted,

HAZARD &amp; MILLER

*Richard H. Miller*  
Attorneys of Record

1-2-50 (W) 97

Serial No. 12,040  
Paper No. 13

## REFERENCES CITED

The following references are of record in the ~~patent~~ file of this patent:

## UNITED STATES PATENTS

Name	Number	Date
Volle	722,059	Mar. 3, 1903
Linke	2,009,768	May 7, 1937

## FOREIGN PATENTS

Country	Number	Date
France	805,592	Aug. 31, 1936

## OTHER REFERENCES

The New Hamblin-Dallos Contact Lens, (publication), <sup>1</sup>/<sub>2</sub> page 143 of "The Optician", April 1, 1930 (C)

Obbit (Text) "Contact Lenses", # 1942, # publication by the Chilton Co., Philadelphia, Pa., # pages 370 to 373 inclusive (C) pages 129 (C) & 130 (C)

"Contact Lenses", # (publication) by E. Freeman O.D., published in The Optometric Weekly, # February 28, 1946, # pages 271 and 276 (C)

"The Design of Contact Lenses" by Vincent Hill, published in "The Optician", # May 23, 1947, # pages 335, 336, 337 and 341 (C)

.. 11 - 98 (continued)

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## REFERENCES CITED

The following references are of record in the patented file of this patent:

## UNITED STATES PATENTS

Name

Number

Date

## FOREIGN PATENTS

Country

Number

Date

## OTHER REFERENCES

9 The Optician (Pub.) "High Precision Contact Lenses" / Sept. 5, 1947, Published by the "Atton Press Ltd., 72 to 78 Fleet Street, London, England ECH, # page 1" (C)

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**DEPARTMENT OF COMMERCE  
UNITED STATES PATENT OFFICE  
WASHINGTON**

*All communications respecting  
this application should give the  
serial number, date of filing,  
and name of the applicant.*

May One, 1950

Hazard & Miller  
706 Central Bldg.  
Los Angeles, Calif.

**MAILED**

**MAY 1 1950**

**NOTICE OF ALLOWANCE**

The application for patent identified below has been examined and found allowable for issuance of Letters Patent.

**APPLICANT**

Kevin M. Tuohy, Assor.

**TITLE OF INVENTION OR IMPROVEMENT**

CONTACT LENS

<b>SERIAL NO.</b>	<b>FILING DATE</b>	<b>NUMBER CLAIMS ALLOWED</b>
12,040	Feb. 28, 1948	2

With the allowance of the application the final fee becomes due. This fee is thirty dollars (\$30) plus one dollar (\$1) for each claim allowed in excess of twenty (20) and must be paid within 6 months from the date of this notice. Failure to remit the final fee will result in the patent being withheld from issue. In remitting this fee identify the application to which it applies by giving the following information: Name of inventor, title of invention, serial number, date of filing, date of allowance, and if assigned, the names of the assignees. The final fee will not be received from anyone other than the applicant, his assignee or attorney, or a party in interest as shown by the records of the Patent Office.

If it is desired to have the patent issued to an assignee or assignees an assignment containing a request to that effect, together with the fee for recording the same, must be filed in this Office on or before the date of payment of the final fee.

The patent will be issued and forwarded approximately 4 weeks after receipt of the final fee.

By direction of the Commissioner.

**J.E. Gonsalves**  
Examiner.

U. S. GOVERNMENT PRINTING OFFICE 16-50210-1

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## PLAINTIFF'S EXHIBIT 117 (Excerpts)

*(Illustrative License Agreements Under The  
Butterfield Patent)**a. Butterfield—Titmus Agreement*

THIS LICENSE AGREEMENT, Made and entered into this 8th day of December, 1959, by and between GEORGE H. BUTTERFIELD, of Portland, Oregon, hereinafter referred to as "Licensor", and TITMUS OPTICAL COMPANY, INCORPORATED, a corporation organized and existing under the laws of the State of Virginia, hereinafter referred to as "Licensee",

## WITNESSETH:

WHEREAS, Licensor is the owner of the full right, title and interest in and to that certain invention described in United States Letters Patent No. 2,544,246, granted March 6, 1951, for corneal contact lens, and has full power and authority to grant thereunder the license hereinafter set forth; and

WHEREAS, Licensee desires to obtain a non-exclusive and indivisible license under said patent to manufacture and sell corneal contact lenses covered by said patent; now, therefore, in consideration of the sum of Ten Dollars (\$10.00) in hand paid by Licensee to Licensor, the receipt whereof is hereby acknowledged, and of the payments to be made as are hereinafter provided, and of the covenants and agreements to be performed, it is agreed:

## 1. LICENSE:

Licensor hereby grants to Licensee a non-exclusive and indivisible license to make, use and sell licensed units, as said term is hereinafter defined, embodying the inventions disclosed and claimed in United States Patent No. 2,544,-

246, upon the terms and conditions hereinafter set forth. It is understood that Licensor has granted other non-exclusive and non-transferable licenses under the described patent and that he does reserve the right to grant further revocable, non-exclusive, indivisible and non-transferable licenses under said patent.

## 2. LICENSED UNIT:

Without purporting or intending either to enlarge or to restrict the claims of the patent herein licensed, and solely for the purpose of simplifying and facilitating the transactions of the parties hereunder, a "licensed unit" is hereby defined as a concave-convex corneal contact lens which has

- (a) a central area having an inner spherical surface and
- (b) a marginal portion encompassing the said central area, having an inner surface formed on a curve different from that of the inner surface of the central spherical area,

the said lens being adapted to provide throughout its entire inner surface uninterrupted clearance between the lens and the cornea over which it is to be positioned.

## 3. PAYMENTS:

(a) Licensee agrees that, for the term of the license, it will pay Licensor a royalty of five per cent (5%) of the gross sales price of all corneal contact lenses coming within the claims of the above-mentioned patent. Gross sales price for the purposes of this agreement is defined as total sales, less credit for returns and earned cash discounts. Payments shall be made quarterly, on or before the 25th day of the month following the end of the quarter. The term of this agreement shall begin on April 1,

1960, and the first payment shall be due and payable on or before July 25, 1960. At the same time as the payment is made to Licensor, Licensee shall also deliver to Licensor a complete and accurate report of the gross sales price of the licensed units, and the number thereof, sold during the preceding quarter.

(b) It is agreed that a licensed unit shall be deemed sold and the sum provided above shall be payable when the licensed unit has been delivered and billed to the purchaser.

(c) Licensee agrees to keep true and accurate books of account containing all of the information required to be given in the statement to be provided Licensor, and to permit a qualified accountant to be paid by the Licensor to inspect the same at reasonable times during the usual business hours.

#### 4. TERMINATION:

(a) It is agreed that in the event Licensee shall fail to make the payments for which provision is above made, or shall fail to provide the reports required or shall otherwise fail to perform any obligation required to be performed, Licensor may, upon thirty days' written notice to Licensee of his intention to do so, terminate this agreement; provided, however, that if Licensee shall, within thirty days after the mailing of the notice to terminate, cure such default by payment to Licensor of all of the sums due to him as of the date of such payment and by providing the reports required to be provided to the date of such payment, and shall otherwise cure the default of which Licensee has been given notice, this license agreement shall continue in full force and effect.

(b) Either party may terminate this agreement by giving to the other party thirty days' notice, in writing,



of his intention to terminate the agreement, provided Licensor may not terminate this agreement so long as Licensee performs all of his obligations as set forth in paragraph (a) above, and, in addition thereto, pays to Licensor a minimum royalty of Three Hundred Dollars (\$300.00) per quarter on or before the 25th day of the month following the end of the quarter.

(c) Termination of the license by Licensor or by Licensee shall not release Licensee from the obligation to pay to Licensor all unpaid sums which have accrued prior to the date of termination, and such termination shall be without prejudice to any right or remedy which Licensor may have for violation of this agreement.

#### 5. VALIDITY OF LICENSEE:

Licensee admits for the full term of this license the validity of the patent above described and agrees that he will not for the term of this license dispute or contest the validity of such patent or the novelty or utility or patentability of the subject matter thereof or the title thereto of Licensor, nor directly nor indirectly assist any other person contesting the validity and/or title of said patent, and that such patent shall throughout the term of this license be deemed to be in force and valid. In the event that the licensed patent is held invalid, or its scope determined as not comprehending a lens made in accordance with this license by a Court of competent jurisdiction from which no further appeal is taken, and if taken the decision below is affirmed or the appeal refused, the obligation to pay royalties under this agreement shall cease.

#### 6. RESTRICTION OF LICENSE:

The license hereby granted is restricted to the corneal contact lens and to the structural and physical character-

istics hereinbefore defined and covered by the claims of said patent, and Licensee shall have similar rights or privileges in any other patent or improvement now or hereafter made in corneal contact lens by Licensor without payment of additional royalty; where Licensor acquires rights in any patent or improvement in corneal contact lens, he will offer the same to Licensee under reasonable terms to be agreed upon by Licensee and Licensor. Licensee shall give suitable notice of this license by inserting in its advertising and on labels, or otherwise associating with the package containing the licensed units, wherever possible, the legend Pat. No. 2,544,246, or a notice as provided in Section 287 of the Patent Laws.

#### 7. PROTECTION OF LICENSEE AND ITS CUSTOMERS:

Licensor agrees that, in the event Licensee or any of its customers are threatened with patent infringement, or sued for patent infringement, by reason of the manufacture and sale of lenses in accordance with this license, he will defend, at his expense, the Licensee or its customers, and will pay any recovery awarded by a Court for such patent infringement; provided (a) he is promptly notified of any threat or suit for patent infringement, and (b) that Licensee and its customers conform to the licensed patent and the terms of this license as to the structure and fit of the lens made and sold by them. Licensee will continue to pay royalty in the event it or its customers are threatened or are sued for patent infringement, until such patent infringement suit is finally decided, and if Licensee or a customer is enjoined, Licensee will be released from payment of further royalty hereunder.

8. Any notice required by this agreement to be given may be delivered in person or deposited in the United States Mail, postage prepaid, addressed as follows:

If to Licensee: Titmus Optical Company, Incorporated  
1015 Commerce Street  
Petersburg, Virginia

If to Licensor: 810 S. W. 9th Avenue  
Portland 5, Oregon

9. This agreement shall be binding upon and inure to the benefit of the successors and assigns of the parties thereto, but shall not be assignable by Licensee except in connection with the transfer of the entire business and good will of Licensee as it is related to the manufacture and/or sale of corneal lenses.

10. In the event the aforesaid patent is infringed by parties, not licensees, Licensor and Licensee will consult and take appropriate action to protect their respective interests.

IN WITNESS WHEREOF, George H. Butterfield has signed and sealed this agreement, and Titmus Optical Company, Incorporated, has caused its name to be signed hereto by B. T. Kinsey, Jr., its Vice-President, and its corporate seal to be affixed hereto and attested by Willis W. Bohannon, its Secretary, both of whom are duly authorized, all as of the day, month and year first above written.

/s/ George H. Butterfield (SEAL)  
George H. Butterfield

TITMUS OPTICAL COMPANY,  
INCORPORATED

By: /s/ B. T. Kinsey, Jr.  
Vice-President

ATTEST:

/s/ Willis W. Bohannon  
Secretary

*(b) Butterfield—Crown Agreement*

THIS LICENSE AGREEMENT made and entered into this 1st day of May, 1960, by and between George H. Butterfield, of Portland, Oregon, hereinafter referred to as "Licensor", and Crown Contact Lens Corporation, organized and existing under the laws of the State of California, hereinafter referred to as "Licensee".

## WITNESSETH:

WHEREAS, Licensor is the owner of the full right, title and interest in and to that certain invention described in United States Letters Patent No. 2,544,246 granted March 6, 1951, for corneal contact lens, and has full power and authority to grant thereunder the license hereinafter set forth; and

WHEREAS, Licensee desires to obtain a non-exclusive, revocable license under said patent to manufacture and sell corneal contact lenses covered by said patent; now, therefore, in consideration of the sum of \$10.00 and of the payments to be made as are hereinafter provided, and of the covenants and agreements to be performed, it is agreed:

## 1. License:

Licensor hereby grants to Licensee a non-exclusive, revocable, indivisible and non-transferable license to make, use and sell licensed units, as said term is hereinafter defined, embodying the inventions disclosed and claimed in United States Patent No. 2,544,246 upon the terms and conditions hereinafter set forth. It is understood that Lessor has granted other non-exclusive, indivisible and non-transferable licenses under the described patent and that he does reserve the right to grant further revocable, non-exclusive, indivisible and non-transferable licenses under said patent.

## 2. Licensed Unit:

Without purporting or intending either to enlarge or to restrict the claims of the patent herein licensed, and solely for the purpose of simplifying and facilitating the transactions of the parties hereunder, a "licensed unit" is hereby defined as a concave-convex corneal contact lens which has

- (a) a central area having an inner spherical surface and
- (b) a marginal portion, encompassing the said central area, having an inner surface formed on a curve different from that of the inner surface of the central spherical area,

the said lens being adapted to provide throughout its entire inner surface uninterrupted clearance between the lens and the cornea over which it is to be positioned.

## 3. Payments:

(a) Licensee has paid the sum of Ten Dollars, (\$10.00) to Licensor coincident with the execution of this agreement, receipt whereof is acknowledged.

(b) Licensee agrees that, for the term of the license hereinabove granted, they will pay to Licensor the sum of Fifty Cents (.50¢) for each licensed unit above described manufactured and sold by them either in finished or semi-finished form. Payments shall be made monthly on or before the 15th day of the month following the month in which the licensed unit was sold. At the same time as the payment is made to Licensor, Licensee shall also deliver to Licensor a complete and accurate report of the licensed units sold during the preceding month.

(c) It is agreed that a licensed unit shall be deemed sold and the sum provided above shall be payable when

the licensed unit has been delivered and billed to the purchaser.

(d) Licensee agrees to keep true and accurate books of account containing all of the information required to be given in the statement to be provided Licensor, and to permit the authorized representative or representatives of the Licensor to inspect the same at any time during the usual business hours.

#### 4. Assignment:

This license may not be assigned in whole or in part, voluntarily or involuntarily, by operation of law or otherwise, without the written consent of Licensor.

#### 5. Termination:

(a) It is agreed that in the event Licensee shall fail to make the payments for which provision is above made, or shall fail to provide the reports required or shall otherwise fail to perform any obligation required to be performed, Licensor may, upon thirty days' written notice to Licensee of his intention to do so, terminate this agreement; provided, however, that if Licensee shall within thirty days after the mailing of the notice to terminate, cure such default by payment to Licensor of all the sums due to him as of the date of such payment and by providing the reports required to be provided to the date of such payment, and shall otherwise cure the default of which Licensee has been given notice, this license agreement shall continue in full force and effect.

(b) Licensor may also terminate this agreement by giving Licensee not less than ninety days' notice in writing.

(c) Licensee may, by giving thirty days' notice in writing to the Licensor, terminate this agreement.

(d) Termination of the license by Licensor or by Licensee shall not release Licensee from the obligation to pay to Licensor all unpaid sums which have accrued prior to the date of termination, and such termination shall be without prejudice to any right or remedy which Licensor may have for violation of this agreement.

(e) Unless terminated sooner, as provided for herein, this license shall remain in full force and effect for the life of the patent hereby licensed.

#### 6. Validity of License:

Licensee admits for the full term of this license the validity of the patent above described and agrees that they will not for the term of this license dispute or contest the validity of such patent or the novelty or utility or patentability of the subject matter thereof or the title thereto of Licensor, nor directly nor indirectly assist any other person contesting the same, and that such patent shall throughout the term of this license and for all purposes be deemed to be in full force and valid.

#### 7. Restriction of License:

The license hereby granted is restricted to the corneal contact lens having the structural and physical characteristics hereinbefore defined, and Licensee shall not have any license rights or privileges whatsoever in any other patent or improvement now or hereafter owned or made by Licensor, and Licensee shall not be permitted, by virtue of this license, to use in any manner whatsoever the name "Butterfield" or any of the trade-marks which have heretofore been adopted by Licensor. Licensee, however, shall give suitable notice of this license by inserting in all receipts or invoices relating to licensed units the legend

“Manufactured under license under U. S. Patent No. 2,544,246” or words to that effect.

8. Notice:

Any notice required by this agreement to be given may be delivered in person or deposited in the United States Mail, postage prepaid, addressed as follows:

If to the Licensee    Crown Contact Lens Corporation  
                             160 N. Orange Grove  
                             Pasadena, California

If to Licensor:        George H. Butterfield  
                             810 S. W. Ninth Avenue  
                             Portland 5, Oregon

The terms of this agreement shall be binding upon and shall inure to the benefit of the successors, assigns, heirs, and legal representatives of the parties hereto.

IN WITNESS WHEREOF, the parties have hereunto set their hands the day and year first above written.

/s/ Geo. H. Butterfield  
LICENSOR

CROWN CONTACT LENS  
CORPORATION

/s/ Milton Charles May        (Seal)  
LICENSEE—President

ATTESTED BY:

/s/ Madeliene L. May  
Secretary & Treasurer



*(c) Butterfield-Frontier Agreement*

## LICENSE AGREEMENT

For valuable and adequate consideration, the undersigned GEORGE H. BUTTERFIELD, of Portland, Oregon, licensor, owner of United States Letters Patent No. 2,544,246 and Canadian Letters Patent No. 487,880, for corneal contact lens, and the undersigned Frontier Contact Lenses, Inc., A corporation existing under the laws of the State of New York of 2075 Kensington Avenue, Buffalo, New York, licensee, a lens manufacturer who desires a license under said letters patent, hereby agree as follows:

1. Subject to the terms and conditions hereinafter set forth, licensor hereby grants unto licensee a nonexclusive license to make, use and sell corneal contact lenses embodying the invention of said letters patent.

2. Licensee hereby agrees:

a. to pay licensor a royalty of Fifty Cents (.50c) for each corneal contact lens made and sold by licensee embodying the invention of said letters patent.

b. to maintain complete and accurate records of all corneal contact lenses sold hereunder and to allow licensor or his duly authorized representatives to examine and make copies of said records at all reasonable business hours for the purpose of checking the accuracy of any royalty statement rendered hereunder.

c. to deliver to licensor on or before the fifteenth day of each calendar month hereafter a written statement showing all said corneal contact lenses sold hereunder during the next preceding calendar month and to accompany each said statement with a remittance of all royalties due thereon at the hereinabove speci-

fied rate. A lens shall be deemed sold when delivered and billed to the purchaser thereof.

d. to mark the containers of all corneal contact lenses sold hereunder with the numbers of said letters patent.

e. in the event the licensee shall sell any of said corneal contact lenses in an unfinished state to be subsequently finished in accordance with the invention of said letters patent, licensee agrees to display on the envelope or container thereof the following printed notice:

"To be finished only in accordance with United States Letters Patent No. 2,544,246 and Canadian Letters Patent No. 487,800."

3. Licensor shall have the right to terminate this license and agreement by giving to licensee written notice of his election so to do only in either of the following events:

a. If licensee shall default in performing any obligation hereunder, and shall fail to cure the default within thirty days after licensor shall mail to licensee written notice specifying the claimed default.

b. If licensee shall be adjudged bankrupt, or shall make an assignment for the benefit of creditors, or if licensee's business shall be placed in the hands of a receiver.

4. Licensee shall have the right to terminate this license and agreement by giving to licensor written notice of its election so to do in the event either of said letters patent shall be declared invalid by a final judgment of a court of competent jurisdiction from which judgment no right of appeal or review remains.

5. Licensee shall not have the right to grant any sub-license rights hereunder, and this license may not be assigned or transferred by licensee without licensor's written consent being first obtained.

6. Licensor hereby acknowledges full satisfaction and settlement of all claims which he may have against licensee for past infringement of said letters patent.

7. Unless sooner terminated as hereinabove specifically provided, this license and agreement shall endure and bind and benefit the parties hereto, their heirs, successors and assigns until expiration of said respective letters patent.

IN WITNESS WHEREOF, the parties have signed this agreement as of November 21, 1960.

/s/ Geo. H. Butterfield  
LICENSOR

/s/ Frontier Contact Lenses, Inc.  
LICENSEE

by Allen A. Isen  
President

\* \* \*

*(d) Butterfield-Vision-Clear Agreement*

PATENT LICENSE AGREEMENT

Subject to the terms and conditions hereinafter set forth, the undersigned LICENSOR, owner of United States Patent No. 2,544,246 and Canadian Patent No. 487,880, hereby grants unto the undersigned LICENSEE a non-exclusive non-transferrable, non-assignable and personal license to make, use and sell corneal contact lenses embodying the inventions of said patents and each of them. In consid-

eration for said license the undersigned LICENSEE hereby agrees to pay to LICENSOR, or to LICENSOR'S order, the total sum of \$10,746.00, which said sum LICENSEE agrees to pay \$149.25 upon execution hereof and to pay the balance of said sum in equal instalments of \$149.25 each on or before the 15th day of each calendar month hereafter until said total sum shall have been paid. Upon the payment of the last of said instalments, this license shall become fully paid up until said respective patents shall expire, and LICENSEE shall become released and discharged from any claim which LICENSOR may have against LICENSEE for infringement of said patents and each of them prior to the date of this agreement. If LICENSEE shall default in paying any of said instalments when due and shall fail to cure the default within fifteen (15) days after LICENSOR shall mail to LICENSEE, at LICENSEE'S last known post office address, written demand therefor, then and in that event, at the option of LICENSOR, the entire unpaid balance of said total sum shall thereupon become due and payable and if suit shall be instituted for the collection thereof, LICENSEE agrees to pay reasonable attorneys' fees incurred in such suit if the judgment therein shall be favorable to LICENSOR.

IT IS FURTHER MUTUALLY AGREED THAT

(a) The sum hereinabove provided to be paid by LICENSEE as consideration for this license is based upon the estimated number of the licensed corneal contact lenses normally to be made and sold in and by LICENSEE'S present business, subject only to normal growth thereof, during the remainder of the life of the licensed patents and, therefore, unless and until LICENSOR'S written consent be first obtained, this license shall not inure or

apply to any other corneal lens manufacturing business or concern which may acquire ownership or control of LICENSEE or of which LICENSEE may acquire ownership or control, or of which LICENSEE may become a division or part, or with which LICENSEE may become merged, consolidated, commingled or affiliated; provided, however, that, subject to the terms and conditions hereof, this license may be assigned to any bona-fide successor to LICENSEE'S entire business and good will, so long as said successor shall continue operation of LICENSEE'S business separate and apart from any other corneal lens manufacturing business; and

(b) That if, prior to the time and full sum hereinabove provided to be paid by LICENSEE as consideration for this license shall have been paid, the herein licensed United States Patent No. 2,544,246 shall be adjudged invalid by a final judgment of a Court of competent jurisdiction from which no appeal or petition for review or certiorari is pending or may be taken and if no other suit involving the validity of said patent shall then be pending, LICENSEE may, at such time, by written notice to LICENSOR, be relieved and discharged from paying the then unpaid portion of said consideration; and

(c) That if LICENSEE shall be adjudged bankrupt or shall make an assignment for the benefit of creditors, this license shall become terminated as of the occurrence of such event.

IN WITNESS WHEREOF, the parties have signed  
this agreement as of the 10th day of November, 1962.

/s/ George H. Butterfield  
George H. Butterfield  
810 S. W. Ninth Avenue  
Portland, Oregon

LICENSOR

VISION-CLEAR CORNEAL LENS  
COMPANY, INC.

a corporation of UTAH

having its principal place of business  
at SALT LAKE CITY, UTAH

BY /s/ Jos. L. Bruneni

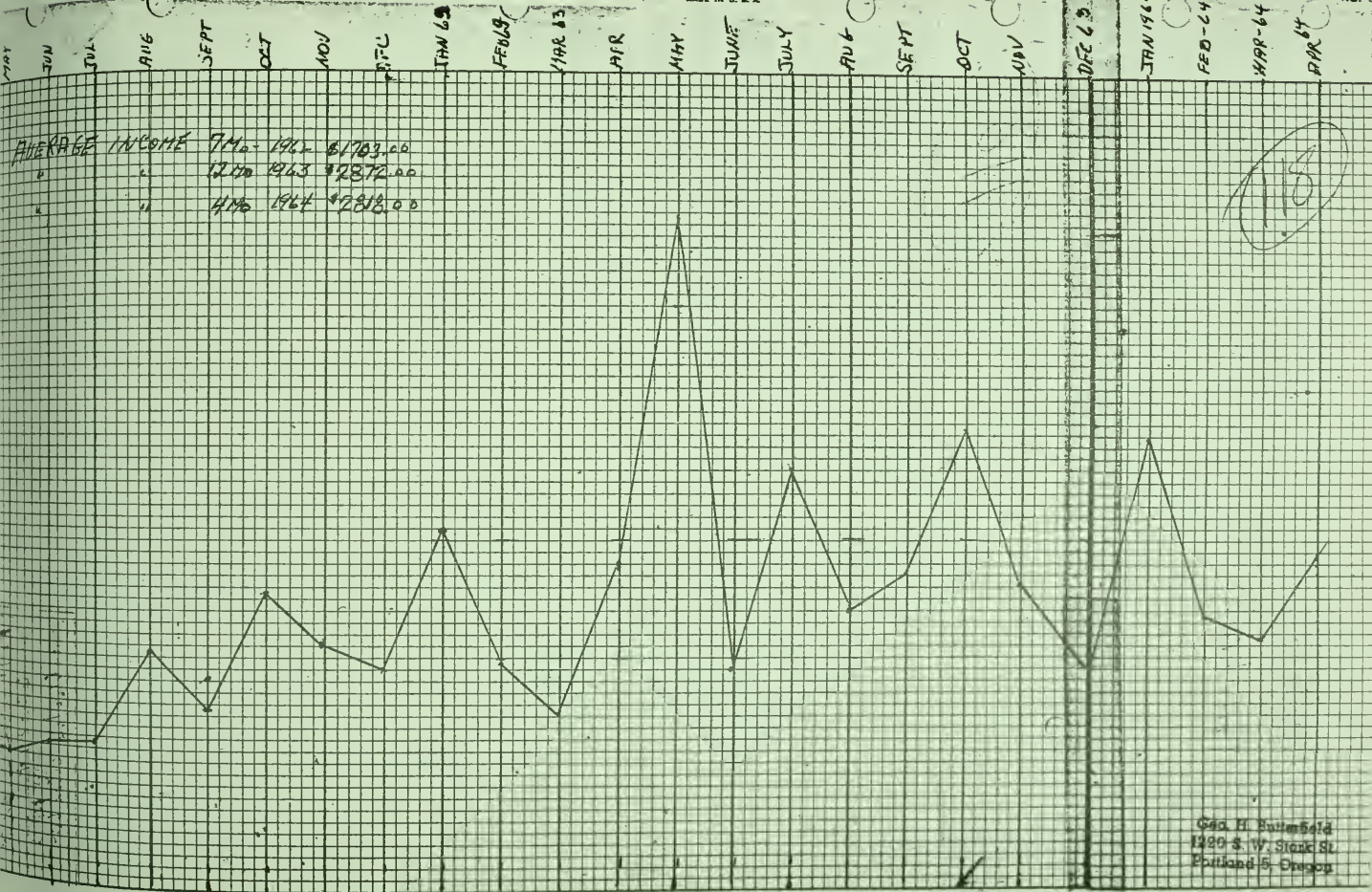
Jos. L. Bruneni,

President TITLE

LICENSEE



## PLAINTIFF'S EXHIBIT 118

EUGENE DIETZGEN CO.  
MADE IN U. S. A.Geo. H. Butterfield  
1220 S. W. Stark St.  
Portland 5, Oregon





PLAINTIFF'S EXHIBIT 121—(Excerpt)

(Plastic's monthly gross royalty collections  
under Tuohy patent licenses)

1961	January	—0—	1962	September	\$22,199
	February	\$ 5,957		October	20,197
	March	15,398		November	24,162
	April	13,313		December	14,429
	May	16,337	1963	January	16,080
	June	17,815		February	15,903
	July	18,558		March	15,563
	August	19,984		April	15,871
	September	19,240		May	17,550
	October	20,919		June	19,452
	November	16,384		July	22,184
	December	29,234		August	22,368
1962	January	20,710		September	19,871
	February	15,514		October	21,892
	March	19,207		November	19,821
	April	31,329		December	15,676
	May	22,204	1964	January	15,498
	June	14,680		February	12,842
	July	21,889		March	14,484
	August	21,427		April	16,368
				May	13,750

## PLAINTIFF'S EXHIBIT No. 143G

August 7, 1962

## CERTIFIED MAIL

Acrylic Optics Corporation  
1926 First National Building  
Detroit, Michigan

Gentlemen:

From a copy of your prospectus which has come to the attention of our client, Dr. George H. Butterfield of Portland, Oregon, it appears that your newly formed corporation contemplates the manufacture and sale of corneal contact lenses which, from the description of the lens contained in the prospectus, appears to be a bi-curved or multi-curved lens which will infringe our client's United States Letters Patent No. 2,809,556, and our client feels it proper to place you upon notice that he intends diligently to enforce his patent rights and to demand that you refrain from infringing his patent.

Our client is granting and has for several years granted license rights under his patent either upon a paid-up basis or a per lens royalty basis.

It is noted from your prospectus that your corporation holds or will hold a license from the Plastic Contact Lens Company. That company also has held a license under our client's patent for several years. Also, it should be mentioned that, in settlement of patent litigation in the United States District Court for the District of Oregon between Solex Laboratories, Inc. and the Plastic Contact Lens Company, on the one hand, and Dr. George H. Butterfield, et al. on the other hand, a consent judgment was entered holding that Solex Laboratories, Inc. had infringed our client's said patent, as will all appear from the copy

of the Consent Judgment and the Stipulation as to Facts and Matters upon which it was based, enclosed herewith.

You should bear in mind that although you may hold a license under any other patent or patents, the license does not convey to you any right to make or sell the lens of our client's patent.

Will you be good enough to advise us promptly of your intentions in this matter?

Very truly yours,  
of MASON & GRAHAM

CM b

Encs.

bc: Dr. George H. Butterfield

Mr. Rupert R. Bullivant

\* \* \*

PLAINTIFF'S EXHIBIT No. 143F

(Letterhead of)

FENTON, NEDERLANDER, TRACY & DODGE

August 15, 1962

Collins Mason, Esq.

Mason & Graham

811 West Seventh Street

Los Angeles 17, California

*Re: Acrylic Optics Corporation—Butterfield*

Dear Mr. Mason:

We are general counsel for the Acrylic Optics Corporation. Dr. Golden forwarded your letter of August 7, 1962 to our office and we are happy that you called this matter to our attention.

Inasmuch as we are interested in obtaining all information with regard to your client's patent, I would appreciate if you would send me any and all information as to how and in what manner our client has infringed upon your client's patent. Naturally, it is not his intention to do so. If, after examination of all the facts, it is determined by our office that there is an infringement, it would immediately attempt to resolve this problem.

Thank you for your cooperation.

Sincerely,  
/s/ R. Nederlander  
Robert E. Nederlander

REN:sm

(Mail Receipt Stamp)  
Received  
Aug 16 1962  
Mason & Graham

\* \* \*

PLAINTIFF'S EXHIBIT No. 143E

August 27, 1962

Mr. Robert E. Nederlander  
Fenton, Nederlander, Tracy & Dodge  
2555 Guardian Building  
Detroit 26, Michigan

Re: *Butterfield Patent*

Dear Mr. Nederlander

Replying to your letter of August 15, 1962. From his long experience in the corneal contact lens business, undoubtedly Dr. Golden is familiar with the Butterfield patent. However, we enclose a copy of his patent for your study.

Generally speaking, we believe you will find that the Butterfield patent covers a bi-curved or multi-curved lens made to be fitted substantially "on K".

Very truly yours,  
of MASON & GRAHAM

CM B

Enc.

cc: Dr. George H. Butterfield, Sr.

Mr. Rupert R. Bullivant

• • •

PLAINTIFF'S EXHIBIT No. 143D

(Letterhead of)

FENTON, NEDERLANDER, TRACY & DODGE

August 30, 1962

Mr. Collins Mason  
Mason & Graham  
811 West Seventh Street  
Los Angeles 17, California

*Re: Butterfield Patent*

Dear Mr. Mason:

Thank you for your letter of August 27, 1962 wherein you enclosed a copy of the Butterfield patent.

As you will recall, in my letter of August 15, 1962 I asked you to inform me as to how and in what manner our client has infringed upon your client's patent, namely, what is the specific basis for your claim that Dr. Golden has infringed upon the Butterfield patent? Is it your contention that the use of a bi-curved or multi-curved lens automatically infringes upon the Butterfield patent?

Naturally, we will be analyzing your client's patent but in addition I would appreciate if you would answer the

above questions so that we can specifically pinpoint the areas in which your client claims we are infringing. Thank you for your cooperation.

Sincerely,  
FENTON, NEDERLANDER, TRACY & DODGE  
By /s/ R. Nederlander  
Robert E. Nederlander

REN:sm

CC: Dr. Donald L. Golden

\* \* \*

PLAINTIFF'S EXHIBIT No. 143C

September 4, 1962

Mr. Robert E. Nederlander  
Fenton, Nederlander, Tracy & Dodge  
2555 Guardian Building  
Detroit 26, Michigan

Re: *Butterfield Patent*

Dear Mr. Nederlander:

Replying to your letter of August 30th.

You apparently misunderstood our letter of August 7th because we did not say that your client had infringed the Butterfield patent. In fact, we did not have sufficient information to form an opinion as to wheter an infringement had actually occurred or was contemplated.

Our only information was that obtained from the prospectus of the Acrylic Optics Corporation, which indicated that its lens was to have a concave surface defined by more than one curve, and we believed it only fair to advise the new company in the beginning, so that it could avoid

infringement. We assumed, of course, that the new company would obtain and be guided by an opinion from its own counsel with respect to the Butterfield patent. We merely mention that the owner of the Tuohy patent is a licensee under the Butterfield patent, and that it had stipulated for judgment in the Portland action holding that its predecessor in interest, Solex, had infringed the patent, because we felt that its counsel would want to consider such information in arriving at their conclusion in the matter.

We would prefer not to express our own views as to the scope of the Butterfield patent because, as you of course know, in the final analysis that is something which only the courts can determine.

Sincerely yours,  
of MASON & GRAHAM

CM B

cc: Dr. George H. Butterfield, Sr.

Mr. Rupert R. Bullivant

## DEFENDANT'S EXHIBIT C (Excerpts)

IN THE UNITED STATES DISTRICT COURT  
For the District of Oregon

GEORGE H. BUTTERFIELD, SR., Plaintiff,	}	Civil No. 63-294
vs.		PLAINTIFF'S
THE PLASTIC CONTACT LENS COMPANY, a corporation, Defendant.	}	ANSWERS TO
		DEFENDANT'S
		FIRST
		INTER-
		ROGATORIES

Plaintiff, George H. Butterfield, Sr., answers Defendant's first interrogatories, subject to all pertinent objections as to admissibility which may be interposed at time of trial, as follows:

. . .

## INTERROGATORY NO. XIV.

Please give the name and address of all plastic contact lens manufacturers (with the name of the individual contacted) whom plaintiff contacted, either personally or by an agent or representative, by telephone or correspondence subsequent to the settlement of the prior litigation (with the approximate date of each such contact) for the purpose of soliciting such manufacturer to take a license under the Butterfield Patent.



## ANSWER TO INTERROGATORY XIV.

Name and Address of Contact as Manufacturer Contacted	Name of Individual Contacted	Approximate Date of Contact
Cumbian Bifocal Co. Portland, Oregon	Joseph Scribe	November, 1962
Gramount Optical Co. Seattle, Washington	Jasper Nigro	June, 1963
Tracon, Inc. Portland, Oregon	L. Campbell	May, 1962
Lowest Scientific or Holz Optical Co. Chicago, Illinois	Dr. Ben Ritholz and Elmer Zwachel, Attorney	June, 1962
Wh-Tint Corp. Vancouver, Washington	Dr. A. Rich	October, 1962
on Contact Lens Lab. Denver, Colorado	Dr. Caton	December, 1962
ntour Kontakt Richmond, California	H. Gates and D. Ewell	June, 1962; January, 1963
ralite Co. Vallejo, California	Dr. Benn	January, 1963
reco Co. Oakland, California	Mr. Boyle	June, 1962
rtury Contact Lens Co. San Francisco, California	Name not remembered	January, 1963
x Optical Co. San Francisco, California	Dr. Eagle	January, 1963
Donald Bruckner San Diego, California	Same person	January, 1963
J. Yoshida Visalia, California	Same person	January, 1963
-Con Co. El Monte, California	Dr. S. Braff	January, 1963
urity Contact Lens Co. Los Angeles, California	Mr. Hernstein	January, 1963
rthwest Northern Optical Seattle, Washington	Jasper Nigro	June, 1963

Name and Address of Contact Lens Manufacturer Contacted	Name of Individual Contacted	Approximate Date of Contact
Muller-Welt Co. Chicago, Illinois	Joe Breger	June, 1962
Universal Contact Lens Co. of Houston Houston, Texas	James Dippery	April, 1963
Professional Contact Lens Co., Inc. Peoria, Illinois	Dr. Conlogue	August, 1963
Professional Contact Lens Co. Inglewood, California	Name not remembered	October, 1963
United Optical Co. Seattle, Washington	Paterson Bros.	June, 1963
Uricon, Inc. Los Angeles, California	J. Urbach	May, 1962
W.R.S. Contact Lens Lab. New York, New York	Mr. Rhine	March, 1964
Precision-Cosmet Co. Minneapolis, Minnesota	Al Anderson	Several times
Professional Contact Lens Co. Portland, Oregon	J. Satterly	May, 1962
Dr. James Goldberg Norfolk, Virginia	Same person	June, 1962
Dr. Adolph Lombard Norfolk, Virginia	Same person	June, 1962
Obrig Laboratories, Inc. Sarasota, Florida	Phil Salvatori	June, 1962
Central Laboratories Lincoln, Nebraska	Dr. Robert Lookabaugh	December, 1962
Vision Clear, Inc. Salt Lake City, Utah	Joe Bruneni	November, 1962
Ackman Los Angeles, California	Same person	May, 1962
Global Contact Lens Co. Miami, Florida	Mr. Cotes, Attorney	April, 1963

Name and Address of Contact as Manufacturer Contacted	Name of Individual Contacted	Approximate Date of Contact
1 Optical Co. Denver, Colorado	James Kuhn	December, 1962
Guaranteed Contact Lens Co. New York	L. Seidner	June, 1962- June, 1963
Banker Wohlk Co. New York	Fred Danker	June, 1962
Dr. H. Silverman New York	Same person	June, 1962
Variable Contact Lens, Inc. Brooklyn, New York	Name not remembered	June, 1962
Contact Lens Co. of America Denver, Colorado	Name not remembered	June, 1962
Dr. E. Neefe Big Springs, Texas	Same person	March, 1963
Dr. Neal Genevay New Orleans, Louisiana	Same person and his attorney	February, 1963
Outour Comfort Contact Lens Waco, Texas	Dr. Bradsky and H. Gerdes	March, 1963
Dr. Marvice Nelson Pasco, Washington	Same person	July, 1962
Professional Eye Products Seattle, Washington	Ron Davis	July, 1963
Universal Contact Lens Dallas, Texas	Matt Franz	January, 1963
Dr. John Battieger, Jr. Miami, Florida	Same person	October, 1962
John Optical Laboratories Denver, Colorado	Mr. Kuhn	May, 1963
William Simpson Anchorage, Alaska	Same person	April, 1963
Dr. Arn Dalweg Bremerton, Washington	Same person	June, 1963
Dr. H. M. Rosenwasser Philadelphia, Pennsylvania	Same person	December, 1962

Plaintiff also published advertisements in the Optometric Weekly.

Plaintiff calls attention to the circumstance that in Defendant's First Interrogatories the Plaintiff is referred to as "George H. Butterfield, *Jr.*" In fact, the correct Plaintiff in this case is George H. Butterfield, *Sr.*, and the true Plaintiff, George H. Butterfield, *Sr.*, is making these answers to Defendant's First Interrogatories. These answers are not made by the individual whose true name is George H. Butterfield, *Jr.*, the son of the actual Plaintiff herein.

/s/ George H. Butterfield, Sr.  
George H. Butterfield, Sr.

STATE OF OREGON                    }  
COUNTY OF MULTNOMAH } SS

I, GEORGE H. BUTTERFIELD, SR., being first duly sworn, depose and say that I am the Plaintiff herein and that the foregoing Answers to Defendant's First Interrogatories are true as I verily believe.

/s/ George H. Butterfield, Sr.  
George H. Butterfield, Sr.

Subscribed and sworn to before me this 5th day of May, 1964.

/s/ Ruth E. Wilhelm  
Notary Public for Oregon  
My commission expires  
October 28, 1966

## DEFENDANT'S EXHIBIT Q

October 2, 1962

Mr. Elliott I. Pollock  
Moore, Hall and Pollock  
1200 Eighteenth Street, N. W.  
Washington 6, D. C.

*Re: Contact Lenses*

Dear Mr. Pollock:

I have your letter of September 28th, and enclose two copies of Dr. Butterfield's paid-up license form, which I think more or less answers all your questions.

Of course, I do not know who the licensee is for whom you are inquiring, or how many lenses it has sold in the past, but I can tell you generally the basis upon which Dr. Butterfield arrives at the sum to be paid for a paid-up license and a release for past infringement:

He estimates the number of lenses to be sold hereafter until the end of the term of the patent (about six years) by taking the average number of lenses which the licensee has sold in the past two years, and considers that it will probably sell an equal number of lenses per year during the remaining life of the patent. Then, instead of his regular per lens royalty of 50 cents, which he charges for a license of a per-lens basis, he makes the royalty  $37\frac{1}{2}$  cents per lens for the paid-up form of license because thereby he saves accounting expenses.

In other words, to state an example, if during the past two years your client has sold an average of 4,000 lenses per year, he would figure that during the next six years they would sell 24,000 lenses, which, at  $37\frac{1}{2}$  cents per lens, would be \$9,000.00, which would be the paid-up sum. The example which I have given may be out of line because the average corneal lens manufacturer probably sells far more than 4,000 lenses per year.

Of course, your client does not have to pay all this amount at one time but, if it so desires, it can be paid so much down and so much per month until the total sum is paid. In fact, the license contemplates this.

Very truly yours,  
of MASON & GRAHAM

CM B

Encs.

bc: Dr. George H. Butterfield, Sr.  
Mr. Rupert R. Bullivant  
(with copy of letter from Pollock  
dated September 28, 1962)

\* \* \*

DEFENDANT'S EXHIBIT DD

(Letterhead of)  
MARECHAL, BIEBEL, FRENCH & BUGG

(Mail Receipt Stamp)

Received

Jul 30 1962

Bair, Freeman & Molinare

July 27, 1962

W. M. Van Sciver, Esq.  
Bair, Freeman & Molinare  
1400 Field Building  
135 South LaSalle Street  
Chicago 3, Illinois

Re: *Plastic Contact Lens Company*

Dear Mr. Van Sciver:

Mr. Butterfield continues to press his claim of infringement against both Univis and its distributors. In a telephone call to Univis today he advises that he has licensed

Plastic Contact Lens Company, as well as Hornstein, and that all contact lenses made today fall under his patent. He is apparently asking a 5% royalty on all such sales. He has also sent us a copy of the consent judgment and the stipulation of facts in the Portland action and this indicated that a license had been granted to Geo. H. Butterfield & Son under the Tuohy patent 2,510,438.

As you can readily understand we are concerned over this attack by Butterfield and particularly are unhappy with his notifying our distributors and threatening them. We note for example also a recent announcement by Titmus Optical that they are licensed under both Butterfield and Tuohy. Are they paying your license fee and Butterfield's 5% too?

If Butterfield has in fact been granted a Tuohy license subsequent to January 1, 1961 on more favorable terms, then Univis should receive the same terms and conditions under paragraph 8 of its agreement. Please let me know as to the terms of whatever license has been given to the Butterfield company.

My general information is that the Butterfield patent applies to a "conformance lens" and that it specifies conditions so fine that it is practically impossible to determine whether any particular pair of lenses in use would infringe or not. However, having gone through a suit, I am sure you must have a great deal of information about the situation and I hope you will be able to write me very shortly after your return about the various aspects discussed above.

Yours sincerely,  
/s/ Lawrence B. Biebel

LBB:pbr  
cc: Univis, Inc.

## DEFENDANT'S EXHIBIT NN



REGISTERED FILE  
RETURN TO RECORD ROOM  
NUMBER (Series of 1948)

PATENT NO.

254424

177050

DATED

AUG 1 1951

(EX'R'S BOOK)

DIV. 7

Name GEORGE H. BUTTERFIELD,of PORTLAND,State of OREGONInvention CORNEAL CONTACT LENS

19

filed

Division of App., No.

ORIGINAL

APPLICATION FILED COMPLETE

AUG 1

1950

PARTS OF APPLICATION FILED  
Petition, Specification,  
Oath, First Fee \$30  
1 sheets Drawings,

AUG 1

1950

TITLE APPROVED  
10-5-51

Examined and passed for Issue Feb 7, 1951 J. E. Connelley Ext. Dic. 7Notice of Allowance Feb 7/51 By Commissioner 19Final Fee \$30 Feb 7/51 19Attorney JAMES D. GIVNAN 1119 EQUITABLE BLDG. PORTLAND, OREGON

Associate Attorney

No. of Claims Allowed 3 Print Claims 1 in O. O. Class 88/84-5



F. E. L. DIVISION

AUG-1-1951

PATENT OFFICE



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17691

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DIVISION 7

AUG 8 1950

U. S. PATENT OFFICE

*Continuation in part*This invention is a ~~continuation~~ of my application .

S. N. 107,948 filed August 1, 1949 and relates to contact lenses and more particularly to a contact lens that covers the corneal region of the eye.

The conventional contact lens, that is, the contact lens which has a scleral flange molded to fit the eyeball has many limitations. Not the least among these is the fact that the wearing time is quite short; a few hours wear causes a corneal misting or halation brought about presumably by the pressure of the lens cutting off blood circulation in the <sup>limbal</sup> ~~limbal~~ region and the prevention of free flow of lacrimal fluid. Other factors preventing this lens from coming into wide use are the need for a special accessory fluid between the lens and the eye. In addition, the difficulties of fitting them to the individual eyeball are apparent and well-recognized. For that reason, a practical corneal lens has been much sought after. In theory, the corneal lens is the ideal method of correcting visual deficiencies, since

C 3491

it does not touch the limbal region, needs no accessory fluid, and has other beneficial optical properties known to workers in the art.

A 5 The applicant, in his invention, has provided a corneal lens which can be <sup>worn</sup>~~worn~~ continuously throughout the full waking day by the average person without experiencing corneal blurring or discomfort of any kind.

Furthermore, the lens of the applicant overcomes a common deficiency of corneal lenses, that is, their tendency to fall away from the eyeball due to insufficient surface tension, capillary attraction or due to the eyelid lifting the lens away from the cornea.

In addition, the applicant has provided a contact lens which needs no accessory fluid, which does not give the eye a bulging appearance, which is perfect from the viewpoint of cosmetology and optology, which is self-cleaning, which is easy to fit, which is free of marginal aberrations, which can be used by persons with pathological conditions of the cornea, and which may be easily and inexpensively manufactured.

20 With the above objects in view, as well as others which  
will appear as the specification proceeds, the invention comprises  
the construction, arrangement, and combination of parts as now  
be more fully described and as hereinafter to be specifically  
claimed, it being understood that the disclosure is merely illustrative  
25 and intended in no way in a limiting sense, changes in

C 3492

details of construction and arrangement of parts being permissible so long as within the spirit of the invention and the scope of the claims which follow.

In the accompanying drawings:

Figure 1 shows a greatly enlarged sectional view of the lens of the present invention taken through the center thereof.

Figure 2 shows a greatly enlarged view of the anterior, convex face of the lens of the instant invention.

Referring to Figure 1, the lens which may be made of methyl methacrylate or similar substances is shown in conjunction with a human eyeball, shown in broken lines. The reference character 10 designates the surface of the cornea while the limbal region is designated 11. Generally speaking, the lens of the applicant is of concavo-convex type and consists of a posterior, concave side 12 and an anterior, convex side 13. The concave side 12 is of a perfectly spherical shape over the central area of the lens indicated by the dimension 5 mm. It is to be noted that the lens shown in the drawing is provided with dimensions; these dimensions are given to show the relative proportionalities between the parts of the lens. The particular lens shown is illustrative of a lens particularly made for a person having a cornea whose radius of curvature in the central portion is 8 mm. The diameter of the central area designated by the dimension 5 mm. is slightly smaller than the maximum diameter of the pupil, the latter diameter being indicated by the dimensional character A. (1)



The convex side 13 of the lens is formed in the central portion with the curvature needed to supply the needed visual correction to the eye; the area that is thus formed is also slightly less in diameter than the maximum diameter of the pupil. The area subtended by the pupil in its minimum contracted condition is indicated by the character B. The curvature of the concave side 12 of the lens changes as the point on the surface is further from the center of the lens; at the edge of the area indicated by the 5 mm. dimension the radius of curvature becomes progressively greater until it reaches a maximum at the outer edge 15 of the lens. In the preferred embodiment shown in the drawing, the radius of curvature increases by  $2\frac{1}{2}$  from the central spherical area to the edge 15. The outside diameter of the lens must, of course be such that the lens may lie on the surface of the cornea 10 *within the area defined by the dashed line* without the edge 15 contacting the limbal area 11. Actually, the concave side 12 of the lens approximates the surface of a paraboloid for a reason to be discussed later.

The anterior or convex side 13 of the lens is formed with a rim portion 14 adjacent to the edge 15. This rim portion is relatively thin and its surface is generally parallel to the surface of the concave side throughout its extent. The rim portion 14 can be said to extend approximately 2 mm. inwardly of the edge 15 and it is indicated by the dimension 2 mm. Between the central vision-correcting portion of the convex side of the lens and the rim portion 15 is a transition area indicated by the

C 3434

dimension 1 mm. This transition area has a smoothly curved surface leading from the thick central part of the lens to the thin outer part and should be such as to present no abrupt changes in contour that may be engaged by the conjunctiva of the eyelid causing displacement of the lenses. The outer edge 15 of the lens is formed as a smoothly rounded surface.

The operation of the lens is based on the fact that the average human cornea is not exactly spherical, but actually is more like a paraboloid, with the central, visual portion being a sphere to all intents and purposes, but with the radius of curvature becoming greater as one leaves the visual area and progresses outwardly toward the limbus.

Yet, in the past, all corneal lenses have been made on the theory that the cornea was spherical throughout and the concave side of the lens has been made spherical also. It can be seen that, if a spherically surfaced lens is used on a paraboloidal cornea, the lens will necessarily contact the cornea at the conus and at the edge. Now, the sphere and the paraboloid are quite similar at the conus and no undue pressure takes place; at the edge, however, the pressure is great enough to cause discomfort and blurring. If the spherical surface of the lens in such a case is chosen large enough to prevent this localized pressure, the lens will be too loose and will easily separate from the cornea because of insufficient capillary attraction and because there will necessarily be a large space between the cornea and the edge of the lens and the eyelid will slip under the lens and lift it.



Now, the theory behind all corneal contact lenses is that the lens be so formed that it can ride on a film of lacrimal fluid which exists between cornea and contact lens; if the lens does not float on such a film or causes a local pressure, there will be discomfort, irritation, and the like and if the space between lens and cornea is too great, the capillary attraction will not exist and the lens may fall away from the eye. The applicant, by providing a lens whose contact surface is very close to the shape of the eyeball, has brought about the ideal corneal contact lens condition.

Since none of the lens outside of the area of the maximum extension of the pupil, designated A in the drawing, is to be used for overcoming the night deficiency and is only present to present the maximum contact area between lens and cornea for maximum capillary attraction, it is possible for the applicant to use the non-visual area in a way to best overcome the past deficiencies of corneal contact lenses. The particular shape provided allows the eyelid to slide smoothly over the edge of the lens. The result is that there is no pain or sensation in the eyelid, and there is no opportunity for the eyelid to pry the lens away from the cornea.

C 3496

## I claim:

1. A corneal contact lens having a contact surface which is the surface of a paraboloid.
2. A corneal contact lens having a paraboloidal contact surface.
3. A corneal contact lens of generally concavo-convex shape wherein the concave surface is the surface of a paraboloid.
4. A corneal contact lens of generally concavo-convex shape wherein the concave surface approximates the surface of a paraboloid.
5. A corneal contact lens of generally concavo-convex shape wherein the concave surface approximates the surface of a paraboloid and the convex surface has the visual correction formed thereon.
6. A corneal contact lens of generally concavo-convex shape wherein the concave surface has approximately the surface of a sphere in a central portion which is somewhat less in diameter than the area of the cornea subtended by the iris during maximum dilation, the radius of curvature of said concave surface increasing slightly and gradually from said spherical portion to the edge of the lens.
7. A corneal contact lens as recited in Claim 6 wherein the amount of increase of radius of curvature from said spherical portion to the edge of the lens is in the order of  $2\frac{1}{2}\%$ .

8. A corneal contact lens having a generally concavo-convex shape wherein the convex surface is formed with the visual correction in a central area slightly less than the area of the cornea subtended by the iris during maximum dilation, the remainder of the convex surface being formed inwardly so that the outer portion of the lens is relatively thin, a smooth transition portion leading from the central visual correction portion to the outer, thin portion.

9. A corneal contact lens of generally concavo-convex shape wherein the concave surface has approximately the surface of a sphere in a central portion which is somewhat less in diameter than the area of the cornea subtended by the iris during maximum dilation, the radius of curvature of said concave surface increasing slightly and gradually from said spherical portion to the edge of the lens, and wherein the convex surface is formed with the visual correction in said central portion, the remainder of the convex surface being formed inwardly so that the outer portion of the lens is relatively thin, a smooth transition portion leading from the central visual correction portion to the outer, thin portion.

and Par  
A1



APPLICATION FOR UNITED STATES PATENT

C 3501 **SOLE****Oath, Power of Attorney, and Petition**

Being duly sworn, I, GEORGE H. BUTTERFIELD  
 depose and say that I am a citizen of the United States of America residing at  
Portland, Oregon; that I have  
 read the foregoing specification and claims and I verily believe I am the original, first, and sole  
 inventor of the invention or discovery in

... [illegible] ...  
 described and claimed therein; that I do not know and do not believe that this invention was ever  
 known or used before my invention or discovery thereof, or patented or described in any printed  
 publication in any country before my invention or discovery thereof, or more than one year prior  
 to this application, or in public use or on sale in the United States for more than one year prior to  
 this application; that this invention or discovery has not been patented in any country foreign to  
 the United States on an application filed by me or my legal representatives or assigns more than  
 twelve months before this application; and that no application for patent on this invention or dis-  
 covery has been filed by me or my representatives or assigns in any country foreign to the United  
 States, except as follows:

And I hereby appoint JOHN J. GIVAN  
1119 Equitable Bldg., Portland, Oregon  
 Registration No. 12,940, my attorney or agent with full power of substitution and revocation,  
 to prosecute this application and to transact all business in the Patent Office connected therewith.

Wherefore I pray that Letters Patent be granted to me for the invention or discovery described  
 and claimed in the foregoing specification and claims, and I hereby subscribe my name to the fore-  
 going specifications and claims, oath, power of attorney, and this petition, this

12th day of July, 1920.

Inventor

First name

Middle initial

Last name

Post Office Address {

314 S. W. 10th AvenuePortland, OregonState of OREGONCounty of CLATSOP

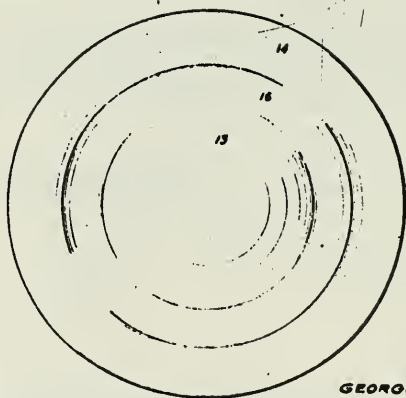
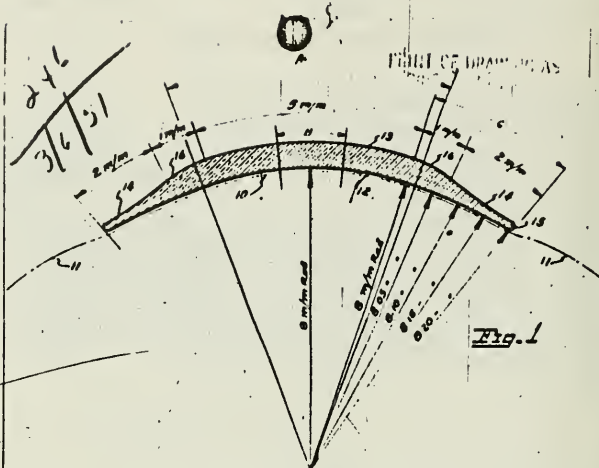
SS

Before me personally appeared GEORGE H. BUTTERFIELD  
 to me known to be the person described in the above application for patent, who signed the foregoing  
 instrument in my presence, and made oath before me to the allegations set forth therein as being  
 under oath, on the day and year aforesaid.

[SEAL]

Notary Public

My Commission expires June 6, 1921



GEORGE H. BUTTERFIELD  
INVENTOR.

BY

James H. Linnard  
ATTY

7 10 58 -54,5

DEPARTMENT OF COMMERCE -  
UNITED STATES PATENT OFFICE  
WASHINGTON

Form No. 3

38 recommendations regarding  
this application should give the  
serial number, date of filing,  
and name of the applicant.

See first below a communication from the EXAMINER  
in charge of this application.

M.D.C./ech

James D. Givnan  
111 Equitable Bldg.  
Portland, Oregon

*John A. Marzall*

Commissioner of Patents.

Division: 7 - Room 6839

Applicant: George H. Butterfield

Ser. No. 177,050

Filed Aug. 1, 1950

Re: CORNEAL CONTACT LENS

MAILED

This application has been examined.

JAN 11 1951

References made of record:

Dickinson (pub) "The Corneal Lens" from the "Optician" - Sept. 2,  
1949 - pp 141 to 144 - Copy in Div. 7 - 80/54.5  
Bier (pub) "Corneal Contact Lenses" from the "Optician" - Sept. 9,  
1949 - p. 185 - Copy in Div. 7 - 80/54.5  
Jones (pub) "Changes in the Form of the Contact Lens Optic" from  
The "Optician" - Dec. 31, 1948 - p 617 and 618

Related art:

Tuohy 2,510,430 June 6, 1950 80/54.5

The reference Tuohy is cited to show a beveled "corneal"  
contact lens.

On allowance of any claim revision as to form may be  
required (Order 5267).

The drawing is informal and is admitted for examination  
purposes only. A space for the heading is required. A new drawing  
is required but such need not be undertaken until the case be  
found to contain allowable subject matter. This application  
appears to be a "continuation in part" of applicants coexisting  
application Serial No. 107,948 and not a "continuation" as stated  
in paragraph 1, page 1 and the specification should be so amended.  
Should not "lumbal" in line 10 page 1 be properly "limbal".

Claims 1 to 9 inclusive are rejected as indefinite and  
not particularly pointing out invention. The claims recite a  
"corneal" contact lens but the exact diameter or extent of coverage  
of the lens can only be imagined. It is not clear whether the

177,050

-2.

lens extends for only a small portion of the corneal area, to the inner part of the limbus, to the outer limbal area or even courses over the sclera. Obviously not all these forms would serve applicants purpose.

Claims 1 to 9 inclusive are rejected as unpatentable over any one of Jones, Bier or Dickinson. The references all show it to be old to form "corneal" contact lenses with inside peripheral curves which are flatter than those of the central area. Obviously this would involve a "parabolic" taper as pointed out in Dickinson and such either is or could be used without the exercise of invention. The specific "parabolic" approximation (Claim 7) selected would of course be dependent on the curves of the patients eye a determination of which is considered to amount to nothing more than routine laboratory experimentation.

All claims 1 to 9 inclusive are rejected.

*J. J. Gonzalez*  
Examiner

C. 3497

DIVISION 7

FEB 7 1951

U. S. PATENT OFFICE

## IN THE UNITED STATES PATENT OFFICE

AMENDMENT

A.

#4

CH.

In re application of  
George H. Butterfield

Serial No. 177,050

Division 7

Filed Aug. 1, 1950

Room 6839

FOR CORNEAL CONTACT LENS

Hon. Commissioner of Patents

Washington 25, D. C.

Sir:

Responsive to Office action of January 11, 1951.

The matter of correcting the drawing is being attended to  
in a separate communication enclosed herewith and directed to the  
Drafting Division.

## IN THE SPECIFICATION:

Page 1, line 10, change "lumbal" to -- limbal --.

Page 2, line 5, change "work" to -- worn --.

Page 4, line 15, cancel "without the edge 1b contacting  
the limbal area 11" and substitute -- within the area defined  
by the limbus 11 --.

Please cancel claims 1 to 9 inclusive without prejudice  
and substitute the following new claims:

-20-11.

✓ A corneal contact lens of concavo-convex form in  
section and of a size to lie within the area defined by the  
limbus having an inner central spherical area conforming to the  
corresponding area of the cornea to which the lens is applied so  
that undue pressure will not be present at any point, the  
remainder of said inner surface extending radially outward  
toward the limbus being formed on a curve different from that  
of said central area and corresponding in curvature with that  
portion of the corneal peripheral area to which the lens is

13

applied, whereby space is provided for the natural uninterrupted circulation of lachrymal fluids between said lens and the cornea.

*ad*  
~~11~~ 2. 1  
 ✓ A corneal contact lens as in claim 10 wherein the anterior marginal area is gradually reduced in thickness toward the periphery of the lens by an arcuate facing in reverse curvature to the convex surface of the lens, both the junction of said arcuate facing <sup>with</sup> the remaining central convex portion and the lens edge having a smooth transition whereby the eyelids may pass freely over said edge.

*ad*  
~~12~~ 3. 1  
 ✓ A corneal contact lens as in claim 10 wherein the anterior marginal area is gradually reduced in thickness toward the periphery of the lens by a concave facing in reverse curvature to the convex surface of the lens, both the junction of said concave facing <sup>with</sup> the remaining central convex portion and the lens edge having a smooth transition whereby the eyelids may pass freely over said edge.

#### REMARKS

The specification has been amended.

Claims 1 to 9 inclusive have been canceled and new claims 10, 11 and 12 substituted therefor.

The references have been carefully studied and when considered singly or combined fail to show or anticipate applicant's invention.

The references, namely, Dickinson, Rier and Jones are discussed below.

The lens described by Rier has a central area which is longer in radius than the radius of the cornea to which it is applied, and has a peripheral area band which is shorter in radius than the center inside area.

In the Dickson article the lens described, but not illustrated, has a spherical posterior<sup>or</sup> surface and is of an over-~~all~~ <sup>base</sup> diameter so that the edge of the lens, which has a small ~~hollow~~ <sup>hollow</sup> rests on the limbal area raising the lens away from the apex of the cornea. JG  
566,145

The article by Jones appearing in the "Optician", December 31, 1948 describes in particular a scleral type contact lens, the optical section of which is described as having a true optic in the center third almost parallel to the cornea and reaches the periphery to flatten out the posterior<sup>or</sup> area more JG  
566,145 than in the cornea, and gradually rejoin the line of ~~THE~~ <sup>the</sup> ~~SCLERA~~ <sup>the</sup> 3 mm. beyond the cornea scleral margin. Further description states that the peripheral 2/3 of the cornea is cleared by the ~~LENS~~ <sup>LENS</sup>. The article also states that "Once having molded and made our cast we must order our shell to be ground with posterior radius slightly flatter than the actual cornea."

As stated above, this lens so described is a molded scleral type contact lens, and in no way resembles the applicant's device, inasmuch as the central optical area has a radius flatter than the cornea, whereas the applicant's device has a central optical area conforming to the curvature of the central area of the cornea. The lens described by Jones has the remaining optical section lying outside of the central optical section departing from the corneal surface related thereto. The type of lens as described by Jones when placed on the eyeball would interfere with the flow of the lacrimal

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fluids which in a short period of time would cause the vision to blur and make the lens unwearable.

In contrast to the above-mentioned lenses, applicant's lens has a posterior <sup>curvature</sup> that conforms to the curvature of the cornea, allowing a spaced relationship between the lens and the cornea which permits the free entry and circulation of the lacrimal fluids. The lens is of an overall size to lie within the area defined by the limbus.

It is to be noted that the <sup>DICKINSON AND BIER</sup> references are dated respectively September 9, 1949 and September 2, 1949.

References which have been brought to our attention although not made of record will be individually discussed as follows:

✓ An article entitled "The New Hamblin-Dallos Contact Lenses" appearing in the "Optician", April 1, 1938, page 143

✓ An article entitled "The Question of Contact Lens Design" appearing in the "Optician" of February 4, 1949, pages 37 to 39

✓ An article entitled "Contact Lens Note" appearing in the "Optician" of March 4, 1947, page 68

5. *Odette Aug 31, 1936*  
French Patent 805,792, Published Nov. 24, 1936, entitled "Adhering Lenses and Contact Lenses for Eyes"

The Hamblin-Dallos contact lens is of the scleral type, and the article discusses the method of manufacturing the lens and not the structure of the lens. No reference is made to the curvature of the inside corneal section except to say that it makes optical contact of the front surface of the eye over the whole area of the lens. This statement is very indefinite, and in no way conflicts with the applicant's lens. Furthermore, the lens as described in the article is <sup>a</sup> scleral type lens which when worn would interfere with the flow of tears between the lens and the cornea, which would result in discomfort, short wearing time and the appearance of Sattler's Veil.



In the article by Steele, reference is made to the work done by Dallos next above mentioned, and would be inoperative for the same reasons as given for the Dallos lens.

Regarding the "Contact Lens Note" appearing in the Optician, March 4, 1947, the lens so described refers to the work by Dallos, and again the same drawbacks appear in that the lens contacts the sclera<sup>x</sup> cutting off the flow of lachrymal fluids which result in discomfort, short wearing time and the appearance of Sattler's Veil.

French patent 805,492, published Nov. 24, 1936, entitled "Adhering Lenses and Contact Lenses for Eyes". This patent covers the manufacture of adhering lenses from blown glass. This lens so described would not be practical inasmuch as no provision is made for grinding an optical surface on the posterior<sup>or</sup> side of the corneal section. This lens would also be unsatisfactory as it has a scleral band, the action of which when applied to the eye would cut off the normal flow of lachrymal fluids, and the lens would soon become unwearable.

Dec. 26/57

From the foregoing, it is obvious that the references all fail to show or anticipate a contact lens as now defined in applicant's claims wherein the lens is of a size such as to lie within the area defined by the limbus and formed with an inner central spherical area conforming to the corresponding area of the cornea to which the lens is applied, and also wherein said inner surface extends radially toward the limbus and is formed by a curvature different from that of said central area corresponding in curvature with that portion of the corneal/peripheral area to which the lens is applied, so that a space is provided for the natural uninterrupted circulation of lachrymal fluids between the lens and the cornea.

17 a 5

Applicant and counsel appreciate the courteous interviews with the Examiners during which the above references were discussed verbally, and also at which the three claims now in the application were deemed allowable.

Respectfully submitted  
GEORGE H. BUTTERFIELD

By

*James H. [unclear]*  
~~George H. Butterfield~~  
Attorney of Record

DIVISION 7 #5

FEB 7 1951

U. S. PATENT OFFICE

IN THE UNITED STATES PATENT OFFICE

In re application of  
George H. Butterfield  
Ser. No. 177,050

LETTER TO DRAFTSMAN

Filed Aug. 1, 1950

For CORNEAL CONTACT LENS

LETTER TO DRAFTING DIVISION

Hon. Commissioner of Patents

Washington 25, D. C.

Sir:

In accordance with the Office action of January 11, 1951, it is respectfully requested that the drawing in the above-untitled application be corrected to provide room for a heading. It is believed that this can be accomplished by lowering the dimension "5m/m" to a position below the dimension line.

Upon receipt of an estimate of the cost for this work, the remittance will be promptly made.

Respectfully,

*James D. Givnan*

James D. Givnan  
Attorney of Record

CORRECTED NO CHARGE

FEB 7 1951

FORM PO-122  
(9-1-50)U. S. DEPARTMENT OF COMMERCE  
PATENT OFFICE

Div. 7 •

## TITLE REPORT


NO. 177,050 (C-P)

NAME George H. Butterfield

THE TITLE APPEARS FROM THE ASSIGNMENT RECORDS TO BE VESTED IN:  
Inventor

EXAMINED UP TO AND INCLUDING Jun. 17, 1951

THIS CERTIFICATE DATED Feb. 7, 1951

  
HEAD OF ASSIGNMENT BRANCH

L

NO FURTHER ASSIGNMENTS APPEAR TO HAVE BEEN RECEIVED FOR  
RECORD INCLUDING:

DEPARTMENT OF COMMERCE  
UNITED STATES PATENT OFFICE  
WASHINGTON

Form No. 6

All communications respecting  
this application should give the  
serial number, date of filing,  
and name of the applicant.

Please find below communication from the EXAMINER  
in charge of this application.

EXAMINER'S AMENDMENT 13

John A. Marzall

E.C.H.

John D. Givnan  
1119 Equitable Bldg.  
Portland, Oregon

Commissioner of Patents.

Division: 7 - Room 6839  
Applicant: George L. Butterfield

Ser. No. 177,050  
Filed Aug. 1, 1950  
For CORREL CONTACT LENS

FEB 7 1951

The changes hereinafter specified have been made in the application identified above in accordance with the provisions of Order Number 3141 of February 4, 1930, (Manual of Patent Examining Procedure 1302.04), which reads in part as follows:

Other obvious informalities in the application may be corrected by the examiner, but such corrections must be in the form of an amendment, approved and signed by the Principal Examiner, placed in the file, and made a part of the record. A copy of the amendment is sent to the applicant. The changes specified in the amendment will be entered by the clerk in the regular way.

If these changes are not satisfactory to the applicant, appropriate amendment may be proposed under the provision of Rule 11, provided the printing of the specification has not begun at the time such amendment is ready for entry. To insure the consideration of such amendments for inclusion they should be submitted on or before the date of remitting the final fee since the printing of the specification begins a few days thereafter.

The application has been amended as follows:

In claims 11 and 12, line 5 remove the comma and insert the word "with" between "facing" and "the".

In line 1, page 1 of the specification change "continuation" to read "continuation in part".

J. E. Bonalere  
Examiner

Serial No. 177,050  
Paper No. 7

C 3499

## REFERENCES CITED

The following references are of record in the patented file of this patent:

## UNITED STATES PATENTS

Name	Number	Date
Tuchy	2,510,438	June 6, 1950

## FOREIGN PATENTS

Country	Number	Date
France	805,592	Aug. 31, 1936

## OTHER REFERENCES

- 1 "The New Humblin-Dalton Contact Lens" (Publication), page 113 of "The Optician", April 1, 1938.
- 4 "Contact Lens Note" (publication), page 68 of "The Optician", March 1, 1947.
- 7 "Changes in the Form of the Contact Lens Optic" by Jones, published in "The Optician", December 31, 1946, pages 617 and 618.
- 9 "The Question of Contact Lens Design", publication appearing in-

C 3500

## REFERENCES CITED

The following references are of record in the patented file of this patent:

## UNITED STATES PATENTS

Name

Number

Date

## FOREIGN PATENTS

Country

Number

Date

## OTHER REFERENCES

"The Optician," Feb. 4, 1949, pages 37 to 39

"The Corneal Lens" by Dickenson, from the publication "The Optician," September 2, 1949, pages 141 to 144

"Corneal Contact Lenses" by Eber, published in "The Optician," September 9, 1949, page 185

AT ONE SO ONLY  
THE COMMISSIONER OF PATENTS  
WASHINGTON 25, D. C.

DEPARTMENT OF COMMERCE  
UNITED STATES PATENT OFFICE  
WASHINGTON

All communications respecting  
this application should give the  
serial number, date of filing,  
and name of the applicant.

February Seven, 1951

James D. Givnan  
1119 Equitable Bldg.  
Portland, Oregon

RECEIVED

FEB 1951

### NOTICE OF ALLOWANCE

The application for patent identified below has been examined and found allowable for issuance of Letters Patent.

#### APPLICANT

George H. Butterfield

#### TITLE OF INVENTION OR IMPROVEMENT

CONCRETE CONTACT LENS

#### SERIAL NO.

177,050

#### FILING DATE

Aug. 1, 1950

#### NUMBER CLAIMS ALLOWED

3

With the allowance of the application the final fee becomes due. This fee is thirty dollars (\$30) plus one dollar (\$1) for each claim allowed in excess of twenty (20) and must be paid within 6 months from the date of this notice. Failure to remit the final fee will result in the patent being withheld from issue. In remitting this fee identify the application to which it applies by giving the following information: Name of inventor, title of invention, serial number, date of filing, date of allowance, and if assigned, the names of the assignees. The final fee will not be received from anyone other than the applicant, his assignee or attorney, or a party in interest as shown by the records of the Patent Office.

If it is desired to have the patent issued to an assignee or assignees an assignment containing a request to that effect, together with the fee for recording the same, must be filed in this Office on or before the date of payment of the final fee.

The patent will be issued and forwarded approximately 4 weeks after receipt of the final fee.

By direction of the Commissioner.

J. M. Consueve  
Examiner.

U. S. GOVERNMENT PRINTING OFFICE 16-5882-1

24



## DEFENDANT'S EXHIBIT 00

NUMBER (Series of 1946)

PATENT NO.

107948

1949

DATED

(EX'R'S BOOK) A-76-2

DIV. 7

GEORGE H. BUTTERFIELD

Name

PG-150  
(11/47)

RETENTION LABEL

Serial No.

107948

Filing Date Aug 1, 1949

This application is referred to  
in Application Serial No. 172452

Filed Aug 1, 1950

Pat 2544246

(Date)  
DO NOT DESTROY

of PORTLAND

State of OREGON

Invention

CORNEAL CONTACT LENS

ORIGINAL

APPLICATION FILED COMPLETE

AUG 1

, 1949

PARTS OF APPLICATION FILED

Petition, Specification,

Oath, First Fee \$30

1 sheets Drawings,

AUG 1

, 1949

Examined and passed for Issue

, 19

Ex. Div.

Notice of Allowance

By Commissioner, 19

Final Fee

Attorney EDWARD B. BIRKENBEUEL

921 TERMINAL SALES BLDG.

PORTLAND, OREGON

James W. Barnan, 1119 Equitable Bldg,

Associate Attorney

No. of Claims Allowed

Print Claims

in O. O. Class

Title as allowed

**E. B. BURCKMUELL**  
 Patent Attorney  
 Terminal Sales Bldg.

Portland, Oregon  
 ZONE 5

July, 27, 1949

Hon. Commissioner of Patents:

Sir:

I am enclosing certified check No. 7542

which includes the following items:

filing fee of \$30.00 for

George H. Butterfield

for \$295.00

Subject CORNEAL CONTACT LENS

Filed

Serial No.

Div.

Room

allowed

gb

Very respectfully,

E. B. Burckmuel  
 E. B. Burckmuel



AUG-1-49

19335

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-KCheck-

30.00



PETITION

WITH POWER OF ATTORNEY

*3000.00*

DIVISION 7

AUG 10 1949

U. S. PATENT OFFICE

TO THE COMMISSIONER OF PATENTS:

Washington, D. C.

Your petitioner, GEORGE H. BUTTERFIELD

a citizen of the United States of America

and resident of Portland in the county of Multnomah

and State of Oregon whose post-office address is

314 S. W. 9th Avenue  
Portland, Oregon

prays that letters patent may be granted to him for a

CORNEAL CONTACT LENS

set forth in the annexed specification; and he hereby appoints

EDWARD B. BIRKENBEUEL (registration number 11,115) of 821 Terminal

Sales Building, Portland, State of Oregon, his attorney, with full power

of substitution and revocation, to prosecute this application, to make

alterations and amendments therein, to receive the patent, and to

transact all business in the Patent Office connected therewith.

Signed at Portland, in the county of Multnomah

State of Oregon this 12th day of July, 1949

*George H. Butterfield*  
Inventor

George H. Butterfield

S P E C I F I C A T I O N

1 This invention relates generally to lenses and particularly  
2 to a lens which is placed in direct contact with the cornea area  
3 of the eye.

4 The main object of this invention is to provide a form of  
5 lens which will comfortably and satisfactorily produce a  
6 desired correction without experimentation or the necessity of  
7 producing a number of lenses whose characteristics surround the  
8 requirements of a given prescription in order that the right lens  
9 may be selected by a patient's choice rather than by scientific  
10 determination on the part of the technician.

11 A further object is to produce a lens which can be worn for  
12 longer periods without becoming dim or uncomfortable as is  
13 commonly the case.

14 I accomplish these and other objects in the manner set forth  
15 in the following specifications as illustrated in the accompanying  
16 drawing, in which:

17 Fig. 1 is a diagrammatic sectional view of an eyeball showing  
18 the cornea and sclera and relation which my lens bears thereto.

19 Fig. 2 is a greatly magnified section through the outer rim  
20 of my lens showing how the rim is thinned on both sides by  
21 concave faces.

22 Like numbers of reference refer to the same or similar parts  
23 throughout the several views.

24 Before entering into an explanation of this invention, it  
25 must be understood that the use of a lens which covers only the  
26 cornea of the eye without extending over the sclera or white  
27 portion of the eye is not new and has been used with varying  
28 degrees of success for a number of years.

29 The difficulty commonly found in conjunction with the use  
30 of such lenses is in the maintaining of the lachrymal fluid  
31 between the lens and cornea in a manner to enable it to function  
32 as a part of the lens.

The second difficulty arose in the formation of a suitable rim near the limbus which would not only be usable on positive or negative lens shapes but also to contribute to the capillary action of the lens itself.

Referring in detail to the drawing, in Fig. 1 there is shown, somewhat diagrammatically, the cornea 10 whose outer convex surface 11 merges with the outer convex surface 12 of the sclera 13 at the limbus 14.

In the particular lens 15 shown in the drawing, the inner concave side 17 conforms to the cornea surface 11, both as to curvature and diameter, whereas the outer surface 17-A is curved to meet the optical requirements.

My lens differs from those now in common use by having the outermost portion of the cornea contacting lens area 16 curved to form a face 18 which relieves the pressure against the outermost area of the cornea 10 and at the same time provides space for tear fluids or substitutes which afford lubrication and light handling properties, the latter of which must remain undimmed as long as possible.

An outer curved rim 19, also concavely limits the thickness of the lens rim 20 and prevents the formation of a shoulder across which the eyelid must pass.

While the actual dimensions and radii of curvature of the lens faces as well as the curvature of the faces 18 and 19 will vary greatly to meet the requirements, the width 21 of the inner curvature 18 is approximately 3 mm. and the surrounding area 16 would be approximately 5 mm. The width 22 of the curved rim 19 could vary from 1 to 3 mm.

It will be noted that the lens 15 does not have its rim 20 bearing directly on the limbus 14 but actually floats on the cornea within the limits defined by the limbus, thereby avoiding any tendency to touch the eye surface and, very importantly,

1 encouraging the maintenance of a fluid-filled space between the  
2 lens 15 and the cornea 10.

3       This lens must not be confused with attempts to solve the  
4 problem by merely rounding the corners of the rim 20 as is usually  
5 practiced. As stated, the characteristics of my lens have been  
6 magnified in order that their nature and purpose may be better  
7 understood.

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Page

I claim:

1. A corneal contact lens limited in size to the area of the cornea and having the inner side of its rim relieved to approximately 3 mm. from said rim.
2. A corneal contact lens approximating the diameter of the cornea against which it is to be worn, said lens having its rim relieved on its inner side forming a capillary space around the periphery of the lens.
3. A corneal contact lens, the outer rim of which is thinned by arcuate facings extending approximately 3 mm. from the rim thereof.
4. A corneal contact lens covering only the cornea portion of the natural eye and relieved within its inner side to form a capillary space extending around the entire lens.
5. A corneal contact lens having the outer edge thereof thinned to approximately 3/5 mm. in thickness by forming a concave face completely around said lens.
6. A lens of the class described having a concave cornea engaging side and a convex outer side, said inner and outer sides terminating in a rim adapted to be disposed near the limbus of the human eye and spaced therefrom, said lens having a capillary space formed inside of its rim around its entire circumference.

add H.

  
George H. Butterfield

## OATH

STATE OF OREGON  
COUNTY OF MULTNOMAH

GEORGE H. BUTTERFIELD

the above named petitioner, being sworn, deposes and says that he is a  
citizen of the United States of America

and resident of Portland, in the county of Multnomah  
and State of Oregon, that he verily believes himself to be the  
original, first and sole inventor of a CONNEAL CONTACT LENS

described and claimed in the annexed specification; that he does not know and does  
not believe that the same was ever known or used before his invention or discovery  
thereof, or patented or described in any printed publication in any country before  
his invention or discovery thereof, or more than one year prior to this application,  
or in public use or on sale in the United States for more than one year prior to  
this application; that said invention has not been patented in any country foreign  
to the United States on an application filed by him or his legal representatives or  
assigns more than twelve months prior to this application; and that no application  
for patent on said invention has been filed by him or his representatives or assigns  
in any country foreign to the United States.

MADE IN FULL

Inventor

George H. Butterfield

Sworn to and subscribed before me this 12th day of July, 1949

(SEAL)

Dane H. Birkenbeuel  
Notary Public for Oregon

My commission expires

BY COMMISSION EXPIRES MARCH 11



107948

#2

PRINT OF DRAWING AS  
ORIGINALLY FILED

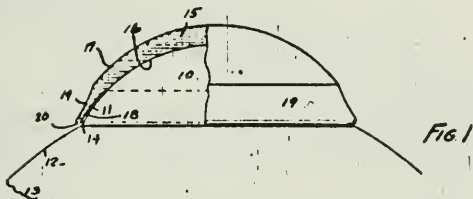


FIG 1

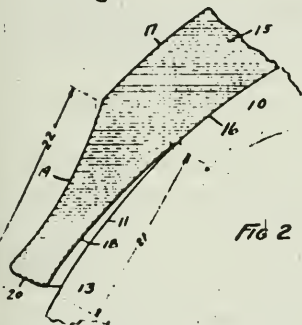


FIG 2

INVENTOR  
GEORGE H BUTTERFIELD  
BY *E. J. R. Humbert*  
ATTORNEY

DEPARTMENT OF COMMERCE  
UNITED STATES PATENT OFFICE  
WASHINGTON

Form No. 3

All communications regarding  
this application should give the  
serial number, date of filing,  
and name of the applicant.

Please find below a communication from the EXAMINER  
in charge of this application.

HLR/av

Edward B. Birkenbeuel  
921 Terminal Sales Building  
Portland, Oregon

MAILED

APR 10-1950

FEB 1 1950

John A. Marshall

Commissioner of Patents.

Division 7 - Rm. 7709

Applicant: George H. Butterfield

Ser. No. 107,948

Filed AUG. 1, 1949

For CORNEAL CONTACT LENS

This application has been examined.

References made of record:

"The Corneal Lens - "A New Type of Plastic Contact Lens"  
by Maurice W. Nugent M.D. Reprint from the Annals  
of Western Medicine and Surgery June 1948 volume 2  
No. 6, 4 pp., copy in Division 7 88/54.5

"The Corneal Lens - Progress Report" by Robert Graham  
publ. in The American Journal of Optometry and Archives  
of American Academy of Optometry (Reprint) Vol. 25, No. 2  
Feb. 1949, copy in Div. 7 88/54.5

Volle 722,059 Mar. 3, 1903 88/54.5

On allowance of any claim revision as to form may  
be required (Order 5267).

The reference Volle though not mentioned in  
the rejection of the claims is cited to show a contact lens uti-  
lizing a reverse or concave bevel on the periphery of the convex  
side of the lens.

The drawing is informal and is admitted for  
examination purposes only. The horizontal hatching is ob-  
jectionable and shade lines are required. The drawing can  
be corrected but such need not be undertaken until the case  
be found to contain allowable subject matter.

Claims 1 to 6 inclusive are rejected as obviously  
fully met by the corneal lens set forth in either the Nugent  
or Graham articles supra.

*J. A. Marshall*  
Acting Examiner

Butterfield Parent Application

165a



#4

*slac*

DOCKET DIVISION

REVOCATION OF POWER OF ATTORNEY

MAY 20 1950

U.S. PATENT OFFICE

TO THE COMMISSIONER OF PATENTS:

The undersigned having, on or about the 1st day of August, 1949, appointed E. B. Birkenbeuel, of Portland, Oregon, his attorney to prosecute an application for Letters Patent which application was filed August 1, 1949, for an improvement in CORNEAL CONTACT LENS, Serial No. 107,948, hereby revokes the Power of Attorney then given.

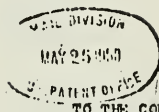
Signed at Portland, in the County of Multnomah and State of Oregon, this 28th day of April, 1950.

*George H. Butterfield*  
GEORGE H. BUTTERFIELD

ACCEPTED

JUN 9 1950

*John A. Marshall*  
COMMISSIONER

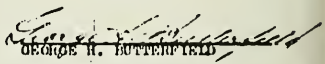


POWER OF ATTORNEY  
TO THE COMMISSIONER OF PATENTS;

U. S. PATENT OFFICE

The undersigned having, on or about the 1st day of August, 1949, made application for Letters Patent for an improvement in CORNEAL CONTACT LENS, Serial No. 107,948, hereby appoints James D. Givnan, 1119 Equitable Building, in the County of Multnomah, and State of Oregon, his attorney, with full power of substitution and revocation, to prosecute said application, to make alterations and amendments therein, to receive the patent, and to transact all business in the Patent Office, connected therewith.

Signed at Portland, in the County of Multnomah and State of Oregon this 28th day of April, 1950.

  
GEORGE H. BUTTERFIELD

7-1-50  
(7-10-50)

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DEPARTMENT OF COMMERCE  
UNITED STATES PATENT OFFICE  
WASHINGTON

June 12, 1950

James D. Givnan,  
1119 Equitable Bldg.,  
Portland 5, Oregon.

Applicant                      George H. Butterfield  
Serial No.                      107,948  
Filed .....                      August 1, 1949  
For .....                      Corneal Contact Lens  
   Div 7

In this case your power of attorney has been accepted.

Very truly yours,

*John A. Marzall*  
Commissioner of Patents

Revoking power of attorney

to

Edward E. Birkenbeuel,  
921 Terminal Sales Bldg.,  
Portland, Oregon.

12

DIVISION 7

NOV 1950

228,131,141,142

IN THE UNITED STATES PATENT OFFICE

AMENDMENT

L. DIVISION  
NOV-1950  
S. PATENT OFFICE

In re application of  
George H. Butterfield

Ser. No. 107,948

Division 7

Filed: August 1, 1949

For: Corneal Contact Lens

Hon. Commissioner of Patents,  
Washington 25, D. C.

Sir:

In response to the Office Action of February 1, 1950,  
please amend the above-identified application as follows:

Cancel the claims now in the case without prejudice  
and substitute the following:

--7. A corneal contact lens of generally concavo-convex shape wherein the convex surface is formed in the central portion with the desired visual correction, said central portion corresponding substantially to the area subtended by the iris during maximum dilation, the remaining portion of the convex surface of the lens being recessed substantially below the central portion so that the outer portion of the lens is very thin, the convex surface being smoothly contoured between the central portion and the recessed portion so as to present no obstacle to smooth passage of the eyelid.

8. A corneal contact lens of generally concavo-convex shape wherein the concave surface is substantially spherical in a central portion corresponding to the area subtended by the iris during maximum dilation, the remaining portion of the concave surface being slightly recessed.

9. A corneal contact lens of a generally concavo-convex form wherein a central portion corresponding to the area subtended by the iris at maximum dilation has a generally spherical surface on the concave side of the lens and is formed with a visual correction on the convex side of the lens, the outer portion of the lens between said central portion and the edge being slightly recessed on the concave side and substantially recessed on the convex side, the junction of the surfaces in the central portion and the surfaces in the outer portion being smoothly contoured.

10. A corneal contact lens of generally concavo-convex shape wherein the concave surface is substantially spherical in a central portion corresponding to the area subtended by the iris during maximum dilation, the remaining portion of the concave surface being recessed, said recess being deep enough to prevent interference between the cornea and the edge of the lens and shallow enough to allow substantial capillary attraction between the surface of the recess, the lacrimal fluid, and the surface of the cornea.

#### REMARKS

The application has been amended and new claims presented which point out more clearly the innovation which is the subject of the applicant's invention.

More particularly, the claims have been drawn to bring out the patentable distinctions between the lens of the applicant and that of Touhy, as described in the publications cited by the Examiner in the first Office Action. Touhy recognized, as did the applicant, that the problems in corneal contact lenses were (1) pressure of lens on cornea at the edges, and (2) tendency eyelid to strike the lens and lift it from the eye. Recognizing these problems did not involve patentable invention, either for Touhy or for the applicant. However, they solved them in two different ways. The first problem, the tendency of the edge of the lens to press on the cornea at the edge with consequent discomfort and blurring, is due to the fact that the cornea is practically spherical in the portion through which light passes for visual purposes but its radius of curvature becomes slightly greater outside of the central, visual portion of the cornea. The result is that a spherical contact surface will fit the central portion perfectly, with a capillary layer of lacrimal fluid between the lens and cornea, of course, but will press against the outer portions of the cornea. The best way to solve the problem would be to use a small lens that covered only the central portion of the cornea; the objections to this are immediately apparent: the complete corneal contact is needed to supply the needed strength of capillary attraction to retain the lens in place and the lens would be free to slide all over the cornea from limbus to limbus. Touhy solved the problem by using a spherical concave surface of slightly greater radius of curvature than the radius of curvature of the visual portion of the cornea and by bevelling the edge of the lens on the concave side.



The applicant, on the other hand, uses a concave surface which is the same as the central visual portion of the cornea; where the cornea begins to depart from the true sphere of its central portion and theoretical interference would take place between the spherical lens and the non-spherical portions of the cornea, the applicant recesses his lens. The recess is deep enough to avoid the interference, but not deep enough to prevent capillary attraction between the surface of the recess, the lacrimal fluid, and the corneal surface. It can be seen then that Touhy and the applicant have solved the problem in two completely different ways.

The second problem, the tendency of the eyelid to strike the edge of the lens and lift it from the eye, was also approached by Touhy and the applicant in two different ways. Touhy merely bevelled the edge of his lens. The applicant recessed the anterior face of the lens deeply from the central visual portion outward and provided a smooth transition between the surface of the recess and the central portion; this thins the portion of the lens that is not used for seeing and, as a practical matter, does away with a large portion of the lens, yet without sacrificing any part of inner contact area needed for the capillary attraction necessary to hold the lens in place. Again Touhy and the applicant present two entirely different means of solving the problem.

Since the applicant has pointed out in his remarks and recited in his claims the manner in which he distinguishes patentably over the references, it is felt that the application is in condition for allowance and such action is requested.

Respectfully submitted,

JAMES D. GIVNAN

*James D. Givnan*

July 31, 1950

10

DIVISION 1

SEP 25 1950



IN THE UNITED STATES PATENT OFFICE U.S. PATENT OFFICE

In re application of  
George H. Mutterfield  
Serial No. 107,948  
Filed AUGUST 1, 1949  
for Corneal Contact Lens

#8  
Suppl. AMENDMENT B

SUPPLEMENTAL AMENDMENT

To the Commissioner of Patents

Portland, Oregon

Washington 25, D. C.

September 21, 1950

Sir:

Please add the following claims to the above application in response to Office Action of February 1, 1950

11. A corneal contact lens of a generally concave-convex form wherein a central portion corresponding to the area subtended by the pupil at maximum dilation has a generally spherical surface on the concave side of the lens formed on a radius equal to the maximum radius of the cornea to which the lens is to be applied and is formed with a visual correction on the convex side of the lens, the outer portion of the lens between said central portion and the edge being slightly recessed on the concave side and substantially recessed on the convex side, the junction of the surfaces in the central portion and the surfaces in said outer portion being smoothly contoured.

12. A corneal contact lens of a generally concave-convex form wherein a central portion corresponding to the area subtended by the pupil at maximum dilation has a generally spherical surface on the concave side of the lens formed on a radius equal to the maximum radius of the central area of the cornea to which the lens is to be applied and is formed with a

visual correction on the convex side of the lens, the outer portion of the lens between said central portion and the edge being slightly recessed on the concave side and substantially recessed on the convex side, the junction of the surfaces in the central portion and the surfaces in the outer portion being smoothly contoured.

REMARKS

The above claims have been added in order to make the application more complete and is within the scope of the invention as originally filed.

Respectfully submitted,

*James D. Given*  
Attorney for Applicant.

James D. Given  
Portland, Ore.

POL-40

UNITED STATES  
THE COMMISSIONER OF PATENTS  
WASHINGTON 25, D. C.

DEPARTMENT OF COMMERCE  
UNITED STATES PATENT OFFICE  
WASHINGTON

Form No. 9

All communications respecting  
this application should give the  
serial number, date of filing,  
and name of the applicant.

Please find below a communication from the EXAMINER  
in charge of this application.

MDR/coh

James D. Givnan  
1119 Equitable Bldg.  
Portland 5, Oregon

John A. Marshall

MAILED

JAN 10 1951

Commissioner of Patents.

Division: 7 — Room 6839  
Applicant: George H. Butterfield

Ser. No. 107,918  
Filed Aug. 1, 1949  
Inv. COMMERCIAL CONTACT LENS

Responsive to amendments filed August 1, 1950 and  
September 22, 1950.

Additional references made of record;

Tuohy 2,510,438 June 6, 1950 88/54.5  
(Filed Feb. 28, 1948)

Claims 7 to 12 inclusive are rejected indefinite,  
functional and not particularly pointing out invention. The  
claims merely recite a corneal contact lens having a "recessed"  
section peripheral to the point of maximum dilatation of the iris  
either on the concave, convex or on both sides of the lens but the  
specific type of recess, direction or orientation of said recess  
which would permit the functions ascribed to it i.e. substantial  
capillary attraction, non interference between cornea and lens  
edge and smooth contouring to necessarily obtain have been left to  
conjecture. Webster defines a "recess" as a space formed by an  
indentation, or the like, in a straight line or in a surface bounded  
by a line conceived of as straight. It appears obvious that even  
considering applicants edge modification as falling within the meaning  
above set forth it would/apparent<sup>be</sup> that not every "recess" or "inden-  
tation" in this area would necessarily serve applicants purpose.  
Conceivably the edge of the lens could be of a thickness greater  
than that of the lens center so that considerable lid obstruction is  
manifested.

107,948

2.

Claims 7 to 12 inclusive insofar as definite are further rejected as unpatentable over Tuohy newly cited. The lens of Tuohy is considered to be "recessed" as broadly and indefinitely recited peripheral to the maximum points of pupil dilation both on the concave and convex sides of the lenses. The lens of Tuohy conforms in shape to the cornea of the eye (see page 1 column 2 line 25) as is the case in applicants device (attention directed to line 10 page 2 of applicants specification).

Claims 11 and 12 are further rejected as drawn to subject matter not originally disclosed. The specification merely states that the lens (page 2 line 10) conforms on its inner surface to the cornea of the eye and hence the statement in these claims that "the concave side of the lens" is "formed on a radius equal to the maximum radius of the cornea" involves a departure from this broad disclosure.

Claims 1 to 6 inclusive have been cancelled.

Claims 7 to 12 inclusive are rejected.

Applicant should prepare for final action.

*J. J. Alves*  
Examiner

MAR

DEFENDANT'S EXHIBIT JJ-1

(Letterhead of Mason & Graham, Counselors at Law)

November 21, 1963

Mr. James W. Clement  
Dressler, Goldsmith, Clement, Gordon & Ladd  
Prudential Plaza  
Chicago, Illinois 60601

Re: Solex v. Midwest

Dear Jim:

Because I was an attorney of record in the above case in Chicago which was recently settled, I believe I should mention a matter which comes to my mind in connection with the enclosed copy of a letter dated November 5, 1963, which PCL has apparently sent to its licensees.

I am not familiar with the details of the settlement, but as I recall, we both were of the view that the PCL license, in its present form, might be contrary to the antitrust laws because it specifically required payment of royalties on unpatented items; and if it should ever be so held, Midwest might receive some antitrust repercussions because, by authorizing PCL to include the Hornstein patent in its present license contracts, Midwest might be held to be participating with PCL in the use of this particular form of license agreement.

What do you think?

Sincerely

/c/ C. M.

of Mason & Graham

CM R  
Enc.